"Bradshawe" Lecture

ON

NERVE-STRETCHING FOR THE RELIEF OR CURE OF PAIN.

Delivered at the Royal College of Surgeons, on Dec. 6th, 1883,

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MR. VICE-PRESIDENT, MR. JUNIOR VICE-PRESIDENT, AND GENTLEMEN,—Dr. William Woods Bradshawe, who was a physician practising at Andover and then at Reading, was M.D. of the University of Erlangen, and he held also other titles of that University. He was M.A. of the University of Oxford. He was a Member of the Royal College of Physicians of London, and a Fellow of this College. He was therefore a man who was not altogether undistinguished in our profession, and one who held a high position in the county in which he resided. He contributed a few papers to the medical journals, and he also indulged himself in writing articles on matters of general interest, under the signature of "Beta." He died seventeen years ago, in the month of August; and fourteen years afterwards his widow left £1000 to the Royal College of Physicians and another £1000 to this College in order to establish perpetual lectureships. This lectureship has been held only once before this day, by Sir James Paget; and as my immediate predecessor chose for his subject some "new" forms of disease, so I have chosen for the lecture on this occasion the subject of what may be called a "new" operation, for it is only within the last eleven or twelve years that this operation has been introduced, and has been used gradually more and more extensively for the "relief or cure of pain." It has also been applied to a great number of spasmodic diseases of the nervous system. But it is in relation to its effects in relieving "pain" that I chiefly wish to direct your attention to this particular operation of "nerve-stretching" on this occasion.

The first thing I have to say concerning nerve-stretching is that you must understand by it not the mere drawing out of a nerve, so that you may see it lifted from its bed in the body, but a palpable stretching. And this opens up the question of, Can a nerve be stretched? Now nerves are extensible to a certain degree, but to a much slighter degree than you would imagine. There is a Table here showing the degree of extensibility of nerves, and you will find that the results, after all, are not very great. One of the observers says that a nerve may be stretched to one twenty-fourth of its length; another observer makes out a larger amount of stretching; and another a still larger amount. But, after all, one is surprised at the small amount of stretching of which a nerve is capable. (See Tables I. and II).

The following simple experiment will show you that a nerve is not so very extensible, though it is extensible. Here is a piece of tendon, and here a piece of nerve; the same weight is applied to the same length of tendon and the same length of nerve; and you will see how very inextensible the tendon is, and how the nerve has only given way a very small degree beyond the tendon. You must remember, however, that the weights employed in the cases mentioned in the table were considerable, some of them as much as 20, 30, and even 80 lb. Here, however, we have only a 4 lb. weight. No doubt, with a greater weight on a perfectly fresh piece of nerve, the nerve would extend still more than this; at the same time the amount of extensibility of nerve is certainly comparatively slight. It is not nearly so extensible as an artery, but it is a little more extensible than a tendon. It has been noticed with regard to this extension that the nerves nearer to the spinal cord are rather more extensible than those at a distance. This may be owing to the relatively less thickness of the sheath. The distant nerves are smaller, but they are probably better protected. It has been observed that the nerves of the upper limb are more extensible than those of the lower limb, probably for the same reason, that the nerves of the lower limb are better protected by sheaths; for we must recognise that it is the sheath that bears the strain when you pull upon a nerve. It has also been noticed that a long piece of nerve will stretch a great deal more relatively than a short one, and this is only in harmony with what takes place in common extensible tissues. If you take two pieces of elastic tube, one twice the length of the other, and load them with the same weight, you will find that the longer piece will stretch relatively more than the shorter one. This piece, for example, has stretched about two inches with 1 lb. weight, and this other will stretch nearly five inches; so, also, the longer the nerve is the greater is its elasticity.

The next point we come to is the recoil of the nerve. After you have stretched a nerve does it recoil? We find observers have proved that it does recoil. According to one observer the elasticity was so great, that although it had been stretched one-twenty-fourth of its length it recoiled to within one-fortieth of its original length. This shows the recovering power in the sheath of the nerve. In the living animal the extensibility of a nerve is greater, and so is its elasticity. A living nerve will stretch a great deal more, with all its tissues in a fine healthy condition—the sheath flexible, its elements mobile over each other—than the dead nerve. So, on the other hand, it will recoil more effectually; its elasticity is greater, its power of recovery greater. This is just what we might expect.

Passing on to other considerations as to the effect of this pulling upon a nerve, the next point is, How much weight will a nerve bear? Now, it is very remarkable that the nerves will bear such an extraordinary weight before they break. In the Table before you, you will see a list of the breaking weights of some of the smaller nerves of the body, varying from 6 lb. in the case of one of the branches of the trigeminus, to 12 lb. in another branch, increasing in weight until you get to the brachial plexus, the median, the crural, and so on, gradually with the size of the nerve. (See Table III.)

However, for a moment let us give special attention to the breaking weight of the sciatic nerve. This has been tested by Symington, Tillaux, Gillette, Trombetta, and others, and they differ most extraordinarily. The weights vary from 82 lb. up to 280 lb. This discrepancy, of course, must be accounted for, and can be accounted for on various grounds. There is no doubt they examined the nerves of persons of different height and conformation, and of persons probably who were not in identical conditions of health; some of the nerves might have been themselves diseased; then again the nerves were examined at different periods after death, in different climates, some in hot and some in cold climates, when no doubt the effect of post-mortem changes might account fully for differences in the results. As the mean result of these various experiments you find that 180 lb. is the weight that the sciatic nerve will bear. You can understand therefore that when I just now put only a 4 lb. weight upon a nerve of this size I was far within the power that is required in order fully to stretch the nerve.

We will now pass from this Table (to which I shall have to return immediately), with only one further remark: That as I contrasted the effects on the dead and the living nerves just now, so here it is shown, after Stintzing (to whose name I shall have again to refer) that whereas the sciatic nerve in a dead animal broke with half the weight of its own body, that weight being about 10 lb., another living sciatic nerve bore 1·8 of the body weight. This, again, shows a great difference in the power that there is in the living as compared with the dead nerve to resist force.

But still more interesting results are displayed when we examine the effect of stretching on the structure of a nerve. And here I might express the general result in the form of a truism. One may say that experiment has shown that every constituent of the nerve is more or less modified, altered, or changed, by a force applied to it, in proportion to the force itself. As I have said, this is a truism, but it is valuable, inasmuch as it throws a sort of mantle of reconciliation over the various observations and facts that have been accumulated on this subject during the last eleven or twelve years. No one who has not perused the literature of this subject can understand how extremely varied the facts are that have been recorded upon it. If, however, we recollect that the particular results vary according to the force used, we shall find that we may pass in a very general way over the effects that have been produced.

Before nerve-stretching came into vogue as an operation, Haber and Harless examined the effects of stretching nerves. They pointed out the tension of the sheath, the elongation of the fasciculi and fibres, and the compression of these within the tightened sheath. Valentin went further, and showed that the small individual tubules of the nerve were elongated

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and narrowed in diameter. Vogt added to these observations, chiefly, however, by confirming them. Gen noticed remarkable constrictions formed on the tubules of the nerve, constrictions to which I shall refer. Quinquand discovered segmentation in the so-called medullary sheath of the nerve. Schleich observed that the segments were at last broken, and that here and there you saw the axis-cylinder, as it is called, passing through them. So that thus we have a series of observations upon the effects of stretching upon the nerve tubules. But Mr. Horsley, at my instigation, has made many interesting observations, some of which certainly seem to throw additional light upon this subject, and for which, I think, his ingenuity must be praised. He has made sections for me of an ordinary unstretched nerve, and of a stretched nerve; and on the diagrams here exhibited, drawn from his specimens under the microscope, we can trace much more effectually than I can do by mere description, what these various observers have seen, as actual changes in the several constituents of a nerve. In the sheath, or epineurium, which covers the nerve you will find in the unstretched specimen that the fibres are beautifully wavy, like the ordinary fibres of fibrous tissue. You find also that the tubules are more or less loose in their sheath, and that even the perineurium, the fine membrane lying between the epineurium and the tubules, also presents this kind of wavy contour in the unstretched state. Bloodvessels are seen at intervals lying in this position. Contrasted with this specimen is one from the same median nerve stretched by a weight of 28 lb., far within its breaking strain, which would be above 60 lb. Here you find that the epineurial fibres, instead of being wavy, are in perfectly straight lines, stretched out as tight as they can be, that the perineurium is perfectly straight, and that the tubules are somewhat narrowed, and also stretched to an extraordinary degree. In a transverse section of the unstretched nerve we see the spaces in which the fasciculi of the nerve fibres lie, the smaller bundles being represented as combining into a larger one, the individual tubules of the nerves being represented in the centre, constituting each fasciculus. In this condition the perineurium is loose, the channels or tubes in which the nerve fasciculi lie are more or less open, and there is a space between the fasciculus and the perineurium, that space being most likely a lymphatic space, occupied during lifetime with lymphatic fluid. The vessels are drawn of a largish size, but in this section we see, irrespective of the changes that may be supposed to take place in the smaller vessels, a complete alteration. You find the epineurium or sheath again tightened in its tissue, and marked with straight, rigid lines, as if the whole texture were pulled out tight and cut in a sort of hard, solid block. You find the fasciculi compressed, and you find the lymphatic space between the actual covering of these bundles obliterated, indicating, as it would appear, the compression of the bundles. This is the compression which no doubt Haber and Harless observed many years ago; but they did not show it in the very decided way in which Mr. Horsley has done.

Now, let us consider what other changes must take place in the nerve tubules. Here is the drawing of a nerve tubule with one of its annular notches in the natural state, and here is the nucleus of a nerve tubule. The outer sheath of Schwann is also represented. The black part represents the soft medullary sheath, the lighter part the axis-cylinder or axis-fibre. It had been observed by Leuterman that the medullary sheath after a certain time broke into these curious segments, not large segments between the annular constrictions of the tubule, but the medullary substance frequently segmented in this curious way; evidently not an accidental occurrence. It might be a crystallisation; it might be a solidification; it might be coagulation; at all events it presents these curious segmented appearances. This was published by Leuterman, but I wish to mention especially that it was discovered quite independently by Mr. Horsley, and for that reason I have wished him to have this diagram here to-day. Besides the segmentation of the medullary matter which seems to be natural, other appearances which have been noticed even in healthy unstretched nerves are these numerous constrictions which probably really occur opposite the segmented parts of the medullary sheath. This appearance has also been observed by Mr. Horsley quite independently of the earlier observations of the author I am quoting. In a stretched nerve the segmentation assumes not quite its regular character, but a more irregular character. This, however, is a regular segmentation, supposing it to be carried a little further than you see above. Below is the effect upon a stretched nerve where these segments get broken up; the medullary sheath lies in irregular masses, whilst most observers agree that the tubular part of the nerve is not broken, or that it is very rarely broken, and that the axis-cylinder is still more rarely torn across. It is only by Marcus and Weit that the observation has been made of the breaking of the axis-cylinder fibre, but rupture of the fine hyaline sheath has been noticed by other observers; so that we find when we examine the minute changes which take place, that the natural segmentation seems to give way to an abnormal or irregular breaking up of the medullary sheath; that sometimes the tubuli break, and that still more rarely the axis-cylinder gives way. These observations have been made not only upon dead nerve—that is to say, a nerve that has been dead some time, but also upon the nerves of animals that have been recently killed. Here, then, we get a series of very remarkable changes demonstrated to be produced upon a nerve by stretching.

If we push this a little further, and inquire what takes place in a living nerve, we find that these anatomical changes are followed by degenerations; and these degenerations may be spoken of just as well under the description of the anatomy of the part as under the account of the physiological changes which take place. Degenerations naturally follow in all these tissues. The sheath becomes infiltrated and hyperæmic, charged with little ecchymoses and larger hæmorrhages, the vessels become compressed or twisted, and the lymphatics must undergo a similar compression. Then, with regard to the tubules themselves, degenerative changes are rapidly set up in them, in which the fine nerve tubule melts away, the axis-cylinder is broken across, the medullary matter escapes in the form of oil globules, and the whole mass of nerve becomes disintegrated, and subject to soft atrophic changes. Then restorative changes follow in the living nerve. Let me mention an experiment in reference to the idea of compression only. There is no doubt, it appears that these bundles must be compressed. The canals in which they lie are narrowed, the lymphatic space round about them is diminished, and the bundles look as if they were compressed, and no doubt they are subject to extreme lateral tension. But it occurred to me to ask, What happens when you elongate a tube? These channels are of course tubes. So, again, the medullary sheath of a nerve is but a hollow tube containing material. What happens when a tube is elongated? Is its original cubic capacity increased or diminished? You will probably think neither the one nor the other—that is what I supposed. But a very simple experiment will show that in an elastic tube, if I extend it, its capacity is increased. Here is some fluid in a glass tube, ending in a piece of elastic tube below. If I pull that down, you will see that the fluid descends. Here, then, is an actual proof that, given an elastic tube of a certain length and elongating it, its capacity is greater than in the unstretched condition. If you apply this to what might happen in the nerve, you find that the perineurial channels, although diminished in transverse diameter, are so much elongated in the act of stretching that their total capacity is increased, and not diminished. And so with regard to the tubules; for I believe that what is true on a large scale must be true on a small. These little tubules, being elongated, must really have a greater capacity than when they are in a natural condition. Now, if this be so, we can understand that this stretching may take place without much compression. It is a subject for further investigation, and I would not pronounce a positive opinion upon it; and I have no time for physiological research. But I can see that here is a sort of struggle between two forces: on the one hand, there is the compression and there is the expansion; there is the narrowing of the tube, and there is the stretching out of its contents to fill the tube, which contains more space; and the result, we can easily see, would be such as to shatter up—to use the phrase—the medullary sheath into fragments, and produce the temporary destruction which we see represented in these diagrams.

With regard to the physiological results of nerve-stretching—that is, on the functions and properties of the nerve, here we find also an endless variety of statement and opinion; but, speaking generally, it may be said that all the functions of a nerve are influenced by its being drawn out or stretched in a greater or less degree, according to the amount of force. The motor properties and the sensory properties are both of them diminished. If the stretching be of a sufficient degree at first there is very little depression; but if the stretching is made stronger and stronger the motor and sensory functions are depressed. The motor functions are less markedly depressed than the sensory functions. All the sensory func-

TABLE I.—EXTENSIBILITY OF NERVES. HUMAN NERVES AFTER DEATH.

—	Extending weight in Pounds.	Distance lengthened in inches.	Ratio to whole nerve.
Median nerve	6½	¾	$\frac{1}{24}$
" "	Extreme weight possible	1¼	$\frac{1}{12}$
" "	Breaking strain	2½ — 2¾	¼ — ¼
Great sciatic and its branches	66 (supposed weight of lower limb)	4 — 7½ (?)	—
Great sciatic (just killed rabbit)	—	(?)	½ — ¼
Great sciatic (living rabbit)	—	(?)	½ — ¼
" " " "	—	(?)	¼

TABLE II.—ELASTICITY OF NERVES.

Human Nerve (after death) extended $\frac{1}{24}$ — $\frac{1}{12}$; retracted to $\frac{1}{20}$.
Rabbit (living) extended ½ (one experiment); wholly retracted.

TABLE III.—COHESION OF NERVES: BREAKING STRAIN IN POUNDS.

Human Nerves after Death (Trombetta).		Pounds.
Trigeminus	1. Supraorbital	6
	2. Infraorbital	12
	3. Mental	5½
Cords of Brachial Plexus		50 to 64
Ulnar nerve		58
Musculo-spiral		61
Median		84
Crural		83
Internal Popliteal		114

Human Nerves after Death.		Pounds.
Great Sciatic	(Johnson Symington)	86 to 176
	(Tillaux)	118 to 127
	(Gillette)	165
	(Trombetta)	82 to 288
	(Ceccherelli)	154 to 220
Lowest weight		82
Highest weight		288
Mean weight		185

Living nerves in animals.—Great sciatic will bear 1·8 of the body-weight. (Stintzing.)
Average weight of human body is 150 lb.; 1·8 of 150 lb. = 83·3 lb.
The normal function of healthy sciatic nerve completely restored, even after the nerve has been stretched with a force equal to a little more than half the body-weight. (Stintzing.)
Safe strain for healthy sciatic (man), 60 lb. Safe strain for diseased sciatic (man), 30 lb.

TABLE IV.—RESULTS OF 252 CASES OF NERVE-STRETCHING IN DISEASE (ARTAUD, GILSON, AND CECCHERELLI).

—	Number of cases.	Success.	Partial success.	Doubtful.	Failures.	Deaths.
Neuralgia of all kinds	99	74	12	7	6	—
Central disease with pain (tabes)	36	5	16	—	7	8
Central disease with contractions	14	12	1	—	1	—
Facial tic	7	6	—	—	1	—
Traumatic spasms	12	10	1	—	1	—
Tetanus	45	14	—	2	—	29
Epilepsy	4	1	3	—	—	—
Peripheral paralysis (motor and sensory)	34	34	—	—	—	—
Lepra (included in the above)	—	—	—	—	—	—
Optic nerve (hallucinations)	1	—	—	1	—	—
Totals	252	156	33	10	16	37

TABLE V.—RESULTS OF NERVE-STRETCHING (NOCHT).

—	Total cases.	Cured. Quickly.	Cured. Slowly.	Cured. Total.	Failed.	Died.
Sciatica	24	16	5	21	2	1
Facial neuralgia	17	10	5	15	2	—
Traumatic neuralgia	19	10	2	12	6	1
Locomotor ataxy (true)	10	Pain: Removal 4; Relieved 3; No effect 1		8	+ 2 deaths.	
Total cases	70					

TABLE VI.—U. C. H. AND SELF.

	Cases.	Improvement.		Failure.
Sciatica	9	4 decided	4 partial	1
Locomotor ataxy	2	— "	2 "	—

tions are depressed; not only that of common touch, but the sense of temperature, heat and cold, and the sense of pressure are all diminished, providing the stretching is strong enough. That, of course, one would understand. Then, with regard to the irritability of the nerve—that is, its power of conducting impressions, this has been tested in various ways, and it is shown that when a nerve is stretched slightly its irritability is increased. This is a very important element, I think, in our attempts to explain what happens in the operation of nerve-stretching. The irritability of the nerve is increased, but if you go on with the extension the irritability gradually diminishes, and is finally extinguished. That early increase of the irritability of the nerve seems to be an important factor in attempting to explain the way in which this operation acts upon living nerves.

Now, with reference to the reflex properties of a nerve: they also are of necessity gradually diminished. But, curiously enough, they are not so suddenly affected as the voluntary motor or the sensory function; and here we have, perhaps, an explanation in the fact that I mentioned, that moderate degrees of pressure, and even tolerably strong pressure, serve to raise the irritability of a nerve, and not to diminish it. It is only when it goes beyond a certain point that it is diminished. In reference to this reflex action not being extinguished so early as sensation and motion, we shall obtain perhaps, a certain clue to the *modus operandi* of nerve-stretching in the cure of pain. These researches do not, by any means, exhaust what we ought to say concerning the action of nerve-stretching upon the functions of the nerve. For here in a most important memoir by Stintzing, which it is scarcely possible to praise too highly, we have the first most elaborate inquiry on physiological grounds as to the effects of nerve-stretching upon the functions of the nerves. He has gone over the whole question, and proved to a great extent what was known before. But the important part about his inquiry is this, that he measured every result; he measures the touch by an æsthesiometer, he measures the cutaneous sensibility by the faradaic current, and the muscular power by the constant current. He puts the results into curves, so that the facts are recorded in a manner which can be immediately understood and appreciated in a much more thorough way than they had ever been before. Again, he has compared the effects produced by using different weights, using often proportionate weights to the weight of the animal's body experimented upon. So that he gives us an account of the effect of the weight of half the animal's body on the sciatic nerve, of three-tenths, four-tenths, five-tenths, working up to 1·8, which I mentioned to you as one of his figures, showing the physiological effect of various degrees of stretching. Setting aside all the irregularities of earlier experimenters, who trusted to merely describing that they stretched the nerve and watched the result, but gave no idea how much force was applied,—he measures the force and measures the effect. Besides this, he has also compared the effect of stretching on the one side as compared with what happens on the other side, and in this way he has shown that the effect of stretching nerves on the one side passes over in various degrees to the opposite side of the nervous system—a very important factor in regard to any explanation which may be attempted of the mode in which nerve-stretching cures disease. And in other ways he has compared the effects of stretching different nerves, as the sciatic and the crural; he has stretched nervés upwards and downwards; and he has pushed his inquiries, tabulated and measured his results, so that his is certainly the most trustworthy account of the effects produced upon the functions of nerves by nerve-stretching that we yet possess, and no doubt it will ultimately lead to modifications of opinion.

Among the interesting inquiries that have been made as to the effect of nerve-stretching, there comes to be this: Are the mechanical effects of nerve pulling transmitted on to the spinal cord, or are they not? Now here Vogt, one of the earlier observers, said not. Gillette, a French observer, said yes,—if you stretched the sciatic nerve you moved the spinal cord in the spinal canal. More recent observers have also come apparently to the same conclusion. Gussenbauer and Braun, working together, have recorded that they have seen in one case a movement through the whole length of the cord up to the occipital foramen. In another case the movement was not measurable, and in a third case they saw no movement at all. In the case in which the movement was measured, one record which, when you take it in millimetres looks large, turns out to be one-fiftieth of an inch. In this one case the greatest amount of movement, in the lumbar region, amounts to one-tenth of an inch; of course this is a palpable movement. Now this positive observation is made by the same observers, who in one of their cases recognise hardly any movement, and in another they recognise none at all. Dana, an American observer, confirms the fact of there being some movement. Symington doubts it. Langenbuch, one of the greatest authorities on nerve-stretching, who has stretched more nerves than any living man, tried this, and he found exactly what was met with in one of Gussenbauer and Braun's cases, that although the movement was propagated to the spinal ganglia and to the sheaths that cover the roots of the spinal nerves as they pass out of the intra-vertebral foramina, it was not communicated to the intraspinal roots of the nerves, and necessarily not communicated to the cord. Mr. Horsley has inquired into this point in four experiments upon the sciatic in the dead body, and he found no movement; and yesterday, having the opportunity again of testing the point in this College, together with Mr. Horsley, I repeated this experiment, and we found no movement. We did find what may be an explanation of an apparent movement in certain cases; we found that, with the greatest care, the spinal column, when you apply traction to the nerves, has its curves a little modified, so that, in fact, what forms a series of gentle curves becomes straighter in some parts, and that of course produces a movement in the cord. When that was prevented, we had no movement. We recognised a movement in the dura mater, and if you remember the attachment of the ligamentum denticulatum on either side between the dura mater and the cord, you will see if you move the dura mater you can gently disturb the cord. I believe in these two ways such casual movements as have been observed by Braun and Gussenbauer and Dana may be fully accounted for, and that practically there is no stretching mechanical effect propagated through the roots of the nerves to the spinal cord. We find the stretching effect pass to the sciatic plexus, we find it passing to the roots of the nerves, where it must disturb the spinal ganglia on the posterior roots, and it must disturb the dura mater. It may by disturbing the dura mater shake the cord a little through the ligamentum denticulatum on either side; but we find no change of tension in the intra-spinal, or intra-meningeal part of the nerve, and no movement in the cord. Here, therefore, we get another important factor when we attempt to explain the *modus operandi* of stretching nerves in the cure of disease.

These are the chief points which I wish to direct your attention to in reference to the actual effects of stretching nerves. But now let us ask ourselves what are the *therapeutical* effects, and on this part of the subject I must dwell very briefly. Knowing that you all have access to the medical periodicals, and that some have tested for themselves the success or failure of these operations, I content myself with pointing out to you a Table constructed from one published by Artaud and Gilson, and added to by Ceccherelli, who has written a most interesting review on this subject in the Italian journal *Lo Sperimentale*, very important, and travelling very much on the same lines, only therapeutically, as Stintzing has done by practical observation. Ceccherelli's figures, added to Artaud and Gilson's, give us this enormous list of 252 cases of nerve-stretching in various diseases. Now, if you look at certain of these several columns you will find no doubt that the successes are comparatively few. Take, for example, tetanus and epilepsy, the successes are but few. But there is a red line in the Table cutting off the two upper components of the Table—namely, the diseases classified under the term "neuralgia" and the special spinal disease which produces locomotor ataxy, sclerosis of the posterior columns of the cord and the posterior nerve-roots. These are the two diseases that are chiefly responsible for what I should call pain—the "pain" which is the subject of consideration of this lecture; neuralgia with all its prolonged torture, and tabes or locomotor ataxy with its lightning flashes. How is it with regard to those? Now with regard to neuralgia, you see the proportion of successes in the first column is enormous. With regard to tabes the successes are far fewer, but the partial improvements in which a modification and amelioration or only a temporary cessation of pain is mentioned, are also not to be ignored. The success in actual neuralgia is great; the success in curing the pain of tabes is much less; still the pains are improved, and that is at least one part of my subject which I wish to bring before you to-day. I could add to that Table many successes and many failures, from other sources; I will caution you against accepting its details; we all know that statistics must be received with distrust. We all know that there

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SENSORY TRACTS (DIAGRAMMATIC).

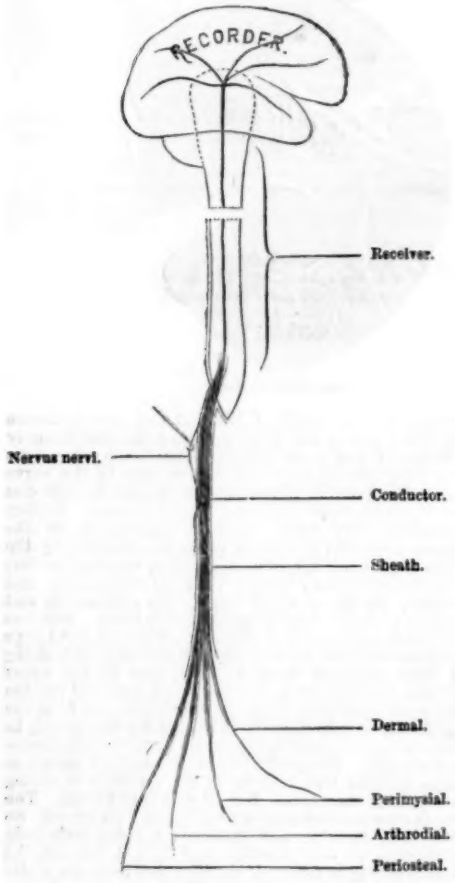
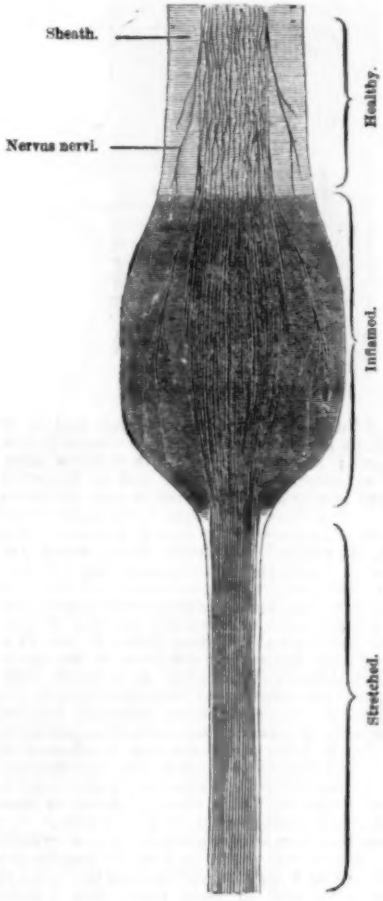
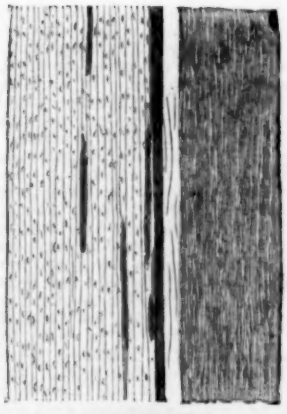


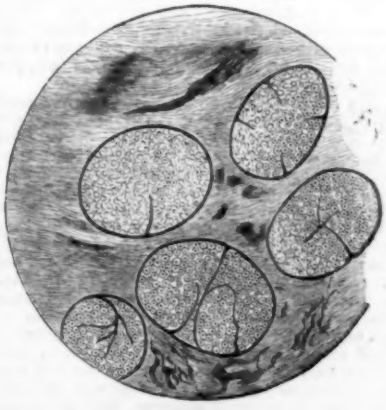
DIAGRAM OF NERVI NERVORUM.



INTERNAL POPLITEAL NERVE, UNSTRETCHED.



Longitudinal section.



Transverse section.

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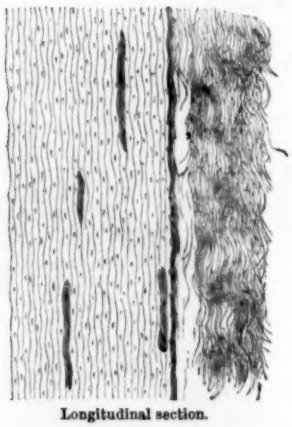
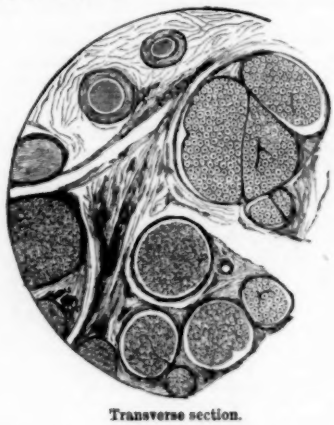
INTERNAL POPLITEAL NERVE, STRETCHED.



Longitudinal section.



Transverse section.

are cases of failure here unrecorded; and that it is extremely difficult to analyse and describe the subjective condition of pain; we know, also, that patients often describe their symptoms too hopefully, and on the other hand the surgeon is only too glad to receive such accounts; we know, lastly, that many recurrences must pass utterly unnoticed in these Tables,—that a case is put down as a success which, if watched sufficiently long, would not justify that term. Making full allowance for all this, still you will find such a preponderance of facts in favour of nerve-stretching curing neuralgia that you cannot dispute the fact that it often does and will cure that disease.

Further, this Table from Nocht (see Tables V. and VI.), constructed long after the other in reference to the operation of nerve-stretching in tabes, gives us certainly sufficient encouragement to believe that nerve-stretching is not only available for the cure of *inveterate neuralgia*, but also for the amelioration of *tabes*. Time will not permit me to analyse these figures fully, but I may say in reference to them and to any other points which may require amplification, that I shall of course, if this lecture is considered worthy of publication, feel bound to explain them. I desire to state now that the Tables contain most of the British cases.

I may pass on, therefore, with a regret that I have no more time to dwell on this part of the subject, to consider the possible *modes in which nerve-stretching cures* the pains of neuralgia and tabes, and to these two points I must exclusively confine my attention. With regard to the pain of neuralgia, it has such peculiar characters, that we can separate it altogether from the pain produced by tabes. First of all, it is often, in fact commonly, unilateral; that of tabes is liable to fly from side to side. The pain of neuralgia runs along the course of a nerve; it is concentrated, as it were, along the path or territory of a particular nerve. The pain of locomotor ataxy, on the other hand, is diffused over the areas of many nerves; it may be on both sides of the body; it may be in the two limbs or in the trunk—in fact, you do not know where it may not be.

Again, the pain of neuralgia is always increased by movement or pressure, and this gives it, of course, a local character. The pain of neuralgia also is more severe at certain apertures where the nerves pass out of the osseous or fibrous framework of the body, or pass round given points of bone. The painful point of sciatica is where the nerve passes out close to the sacro-sciatic ligament; and every movement or twitching of the adjacent muscles is liable to press upon a tender nerve, and also to influence its circulation by acting on the branches of the sciatic artery and vein which supply the nerve. Another painful point is just below the head of the fibula, where the external popliteal turns round below the head of that bone, is there bound down by the fascia, and is liable to pressure. The fact, indeed, is that neuralgic pains are increased not only by external pressure and by internal movement, but they manifest themselves at particular points of the nerve, which, owing to the construction of the body, are themselves liable to internal pressure, including pressure upon their bloodvessels, and thus to a hindrance to their circulation, and an intensification of any hyperæmia to which they may be subjected. I would also venture to point out that we must consider neuralgia, I think, at any rate in severe cases, as not a pain in the nerve tubules (otherwise it surely would be transferred by the consciousness to the extremities of those nerve fibres), but that it is a pain in the nerve itself, and this, I think, points out that it must be pain due to what I have ventured to call the *nervi nervorum*. Sappey has described such nervi nervorum running on to the optic nerve only,—in that case, of course, supplied by the ciliary nerves. I think, on the other hand, we may see that in an ordinary sensory nerve, or a mixed sensory and motor nerve, the fibres which supply the epineurium and perineurium probably come from the nerve itself. This has not yet been demonstrated in the ordinary nerves, but I hope that someone will take up the point and will succeed in doing so. I have imagined them to exist, and in the upper part of this diagram, in a healthy nerve, you will see the so-called nervi nervorum, supposed to be coming out from the trunk of the nerve and ramifying in its sheath; they ramify in other fibrous tissues, and it is the nerves alone in such tissues that produce pain. We speak of neuralgic pain as if there was something peculiar and striking in it. So there is, seeing that it is pain in the nerve. But all pain is in nerves. The periosteum does not feel pain, except through its nerves. So with the skin, muscles, and tendons; nothing feels pain except through its own nerves. And here, I contend, the argument is strong in favour of the idea that there are really these nervi nervorum in the sheath of a nerve. If you touch a dermal nerve the sense of pain is carried up to the recorder—that is, it is received on the spinal cord, and is carried up to the brain, and produces a sensation of pain at the skin-point corresponding to it. So with the periosteal sensory nerve, so with the nerve going to a joint, so with the nerve going to muscle and tendon, and so with the *neural* nerve) if I may so call it, the nervus nervi, coming out from the sheath of the nerve, which produces a sense of pain upon its own extremity. Now, supposing this to be the case, and that we have the nerve stretched, what can become of these nervi nervorum. In an inflamed state, represented by the swollen part of the nerve—the hyperæmic condition, the plastic matter thrown out, the irritating fluids, gouty, rheumatic, &c., must excite these nerves. The lower part of the diagram represents the proportionate effects of stretching as compared with the upper part. Now what, in that case, must become of the proper nervi nervorum? They must be stretched, they must be broken; their tubules must be actually sacrificed in this way very much more completely than the tubules of the nerve in the interior. These are soft and elastic and free to move, and we find they become very elongated, but they do not become broken except in rare instances. But what must happen to nerve tabuli, the extremities of which are fastened into the sheath? They must be stretched so as to be paralysed completely; and in this way, I believe, we can account for the relief of certain neuralgic pains. Of course we must not ignore the fact that side by side with these neurilemmal or perineurial conditions, there are conditions which will cause pain in the internal tubules themselves, and these are probably arrested or interrupted by the shattering of the medullary tissue and the stretching of

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the axis-cylinder, which I have described as actually taking place. I would not for a moment suppose that all neuralgias are due to nervi nervorum, but I do think that a large proportion are. They may be considered to be true peripheral neuralgias. Nerve-stretching probably acts in the way I have described in a great many cases, but in other cases by partially benumbing or paralysing the internal tubules, arresting their functions for a time; or, further, by indirect effects on nerve-centres.

With regard to tabetic pains, they are produced evidently in association, not so much with changes in the nerves outside the dura mater, but rather, so far as we know, with changes in the posterior roots, and in the spinal cord. Still, observe, the changes are chiefly in conductors; they are not in the grey substance alone, they are rather disproportionately in the conductors—that is, in the roots of the nerves and in the posterior columns; and although we speak of this tabetic affection as a central affection, I think we should take care to eliminate from our minds the idea that it is entirely a grey matter disease, or rather, we should not overlook the fact that it still is a disease of the conductors of nervous impressions rather than of the receiver of nervous impressions. Certainly the conductors suffer obviously more than the receiver, although the receiver no doubt likewise undergoes changes; the grey matter undergoes changes, but the white matter is more conspicuously affected.

But how can nerve-stretching affect these intra-meningeal these intra-dura-matral conditions? We must have recourse to something different from the mere mechanical effect of stretching, because we have shown that stretching does not go beyond the roots of the nerves in the sheaths of the dura mater. But there it affects the ganglia, there it produces an excitation of the vasi-motor centres or trophic centres; and to the reaction that takes place, and the changes induced in the nerve elements in consequence of that, I think we must look for the benefit obtained in cases of tabes dorsalis or locomotor ataxy. The explanation of the cure of neuralgia seems to be easy when it is peripheral. Admitting that there are other neuralgias which are central, the effect of nerve-stretching in the cure of those must be by producing some indirect effect upon central nerve elements, through trophic changes probably induced by the disturbance of vasi-motor actions. Here, again, I must ask you to excuse me from following out these ideas to their fullest extent, the scope of my lecture being rather, of course, to illustrate here and there points in the subject which seem to me to be most interesting, leaving it to others who are also engaged in the practice of our profession and in the investigation of disease, to follow out any hint which I may have dropped.

I pursue my course, therefore, by asking what are the cases in which nerve-stretching should be employed, and what seem to be the indications for the proper mode of employing it? Now it seems quite certain that in these preparations on the table we have cases in which nerve-stretching is suitable. Here are two examples of neuromas of stumps. This is a painful ulcer of the skin, for which in former days a limb was sacrificed, and it might probably have been cured by stretching the posterior tibial nerve, or whatever nerve was involved. This, again, is a nerve which has received some damage, but only appears to have on it a mass of coagulated blood, still causing immense suffering, but quite probably curable by nerve-stretching. Here is another case of a painful ulcer which, I think, might have been well treated by nerve-stretching. In this jar we have a beautiful example of nerve-thickening of the median and ulnar nerves, opposite the annular ligament of the wrist, causing such excruciating pain that the forearm was amputated. This was a case which I firmly believe would have been completely cured by nerve-stretching for neuralgic peripheral disease. This, again, is a case which illustrates the contrary view. It is the fractured limb of a donkey with a nerve entangled in the cicatrix or in the soft callus. Here, probably, the treatment would be not nerve-stretching, but dissecting up the nerve, restoring it to its freedom if possible; or, if not, paring off the ends of the nerve and ligaturing them together, as has been done with success by one of our own Council at present in this room. Then, there are tumours of nerves in which one could not recommend this operation, multiple neuromas situated in the very heart or substance of a nerve; in such cases stretching would certainly be useless. In cases like that, one would dissect out the tumour, or, if not, one must sacrifice the nerve. Then we get still more formidable examples of tumours of nerves, in which cases tumours exist more or less in nerves in every part of the body. Here is a sciatic nerve in which there are at least a dozen or fifteen little nodules. Here, again, is a specimen of an arm in which every nerve has one or two nodules upon it. These multiple neuromas are some cancerous, some soft sarcomas, and others fibromas; but all cases of this kind would be utterly unsuitable for nerve-stretching. Here is a beautiful specimen of a tumour pressing on the intraspinal sensory roots of lumbar nerves, in which the most excruciating agony was suffered. In that case I, some years ago, *divided* as many of the branches of the crural nerve as I could get at, without relief. After death, the patient being examined, a tumour was found inside the spinal canal, sufficiently explaining the reason of the failure of the operation to give relief. Could we hope to get any benefit in such a case from nerve-stretching? The probability, I am afraid, is not; because we have shown that nerve-stretching does not pass beyond the dura mater, does not affect the posterior roots. Besides, no change in the nutrition of the tumour through vasi-motor action could be expected to give relief, as it seems to be able to give relief in cases of tabes dorsalis. Finally, as to the *mode* in which this new operation should be set about. First of all, we may indulge in a generalisation with regard to the physical experiments, the investigations into anatomical structure, and how that is altered by stretching, those on the functional disturbances that take place in nerves, and lastly, the observations on the therapeutic effects of stretching nerves—all of which I have been able to glance at—viz., that we should set very little value on these if they did not furnish us guides for the mode of operation, so far as we are at present able to use them safely. I need not say, with regard to these operations, that they must be directed to the nerve itself—that is to say, that in all cases of neuralgia (with one exception, which I shall mention presently) the operation consists in exposing the nerve, lifting it either with a hook or with the finger, stretching it to a certain point so as to produce that palpable stretching of which I have spoken, and without which the operation will fail.

To what extent may we stretch? These Tables do not give us any reliable information if we translate them literally, because if you take the mean of these numbers, that will be an unsafe guide. There have been sciatic nerves broken, as you see, at 82, whereas the mean is 185 lb. Therefore the arithmetical mean is of no value at all; every practical surgeon would shake his head and shudder or laugh at it. Nor can you take the lowest of these numbers, 82, because some sciatic nerves may break at a lower weight than that. Stintzing's observations have shown that in the living nerve you may safely stretch it with half the weight of the animal's body. Here we get a little safer guide, that will diminish the strain or force on the sciatic nerve from 80 lb. to half the average weight of a man, or 75 lb. But that is not a perfectly safe guide, because we are dealing with diseased nerves. The nerve we are operating on is not a healthy nerve, the man not a healthy man; you must go, therefore, far below that limit. Stintzing has observed this, however, which is a great consolation, that you may stretch the sciatic nerve of an animal by half the weight of its own body, and you will produce temporary anæsthesia, temporary paralysis, temporary loss of nerve power, but it will all recover; every function of the nerve will be recovered, provided you limit your weight to half the weight of the living animal's body. These are experiments on the sciatic nerve, so that, at any rate, if we used 75 lb. weight upon the human sciatic, and it did not break, we should feel that whatever mischief we did it would be recoverable in a healthy man. But, as I have said, we must translate these conclusions in their application to *disease*, and I would myself counsel that no sciatic nerve should ever be stretched by a greater weight than between 30 lb. and 40 lb. I should say 30 lb. is a reasonable weight. Here I have a dynamometer which will enable you to understand at a glance how difficult it is to apply a weight of 30 lb. to a nerve. If I put this ring upon a staple and pull as I would pull at a nerve, I find that there is a pull of 20 lb.; but if I pull very hard I find that it increases to 30 lb., and that, I think, is as hard as a man can well pull holding a soft nerve with his finger and thumb. You must pull gently. You will find that a very strong man, pulling with both hands, can only pull up to about 80 lb., 90 lb., or 100 lb. But if you pull as you would pull a nerve, you will find that 30 lb. is about the limit of your pull. We have here also a portion of the sciatic nerve, not a very good specimen, somewhat decomposed; and you will be able to try after the lecture and see what you can pull upon it. You will see that it will bear a weight of 30 lb. quite easily. I take it, then, that 30 lb. is a very safe weight to use. Now, taking the limit

of 30 lb. for the sciatic nerve, of course this would be graduated downwards for smaller and smaller nerves. Gillette invented a dynamometer to use in operations, but I believe he gave it up afterwards; and I should say it is an instrument which may be condemned. Surgeons should educate their feeling of resistance so as to be able safely and adequately to stretch a nerve, adequately in order to cure, safely so as not to injure the patient. We do educate ourselves in a great number of ways without instruments. We can tie an artery without tearing the outer coat, and either with or without tearing the middle coat; we can test the tension of the eyeball and see whether it is greater or less than it ought to be; we can displace or extrude a cataractous lens safely; we can use a certain amount of force in reducing a hernia so as not to burst an intestine, and yet succeed in our object. Now, if the surgeon can do this without dynamometers, why should not he be able to cultivate the same amount of internal dynamical discipline and exercise his tact in stretching a nerve? This is far preferable to any instrument, which might deceive you at any moment. You might meet with a nerve so strong that your instrument would be safe; whilst the next nerve, apparently looking just like it, would be dangerous to stretch with the same force; but if you grasp the nerve with your hand and feel, by the resistance it offers, you can judge, after a few experiments on a dead nerve, how much force is necessary to produce that adequate stretching of which I have spoken. The nerve sensibly yields to your traction; you feel an internal creeping movement in the particles of the nerve—of the sheath, no doubt; you feel a certain attrition and vibration going on; and you must educate yourselves to that, and then you will be safe.

But now there are two other points of great importance in nerve-stretching which I think have not received sufficient attention, and that is, not the direction, but the *mode* in which you pull, either with irregular jerks or with a steady pull, and *how long* that pull should last. Here, again, Stintzing comes to our aid incidentally. You can make use of his facts in this and many other ways. Thus, he found the best way to produce his results with measured weights, corresponding with half the body, a quarter of the body, one-third of the body, and so on, and also to ensure his experiments being parallel, was to keep up the given pressure or weight for a certain uniform time. Now, the time that he adopted in various experiments was from three to six minutes, but in certain experiments where he wished to have exactly parallel results he kept up a stretching uniformly for five minutes. Now, I believe if stretching with a moderate power, prolonged for a certain time, was really the *modus operandi* adopted by Surgeons, they would have better and safer results than they have now. A sudden pull is not enough, however hard it may be; a series of jerks, also, are inadequate, for each jerk only repeats the mischief of the impressions produced by the previous one; but if you put a strain upon the nerve and stretch continuously, say, for five minutes, with a moderate pull, you are producing insensibly those internal changes of which I have spoken as essential to the production of genuine nerve-stretching. Now, with regard to pulling the nerves upwards or downwards, it does not seem, in experiments, to have had much effect. Stintzing says that on therapeutic grounds it would be far better to stretch downwards in tabes and upwards in neuralgia. I should say myself stretch both ways for neuralgia, and get as near to the seat of severest pain as possible. It is of less consequence to stretch from the extremities in tabes; it is essential to stretch from the trunk or body.

Before concluding I must ask you to bear in mind that the cutting operation to which I have alluded hitherto, is not the only way of stretching nerves, for it has been found in the case of the sciatic that if you bend the thigh upon the body, so that the knee comes up to the chin and then straighten the leg upon the thigh and flex the foot upon the leg so as to stretch the ankle-joint also, you can produce an extraordinary strain and tension upon the sciatic nerve as it passes out of the pelvis. Trombetta, who is a great advocate for this method—Billroth has the credit for introducing it, but I believe Trombetta was earlier,—found that the sciatic nerve in the dead body could be stretched one inch by this proceeding; but the proceeding must be tolerably firm and resolute, and I would say, in order that it should succeed, it should be continued for five minutes. That is the sort of rule I would lay down in all these cases. Mr. Horsley has stretched the sciatic nerve on the dead body in this way, and has found that it does diminish the diameter of the nerve. He intended to have brought the specimen here to compare it with an unstretched nerve. As a matter of fact the nerve is stretched according to Trombetta, and is diminished in diameter, according to Horsley. In a living person, I have found the exposed sciatic to be very tightly stretched by forced flexion of the lower limb. Here, then, is an undoubted power of stretching the sciatic without a cutting operation; and the results of this, which the Germans call the *unblutige* operation, as contrasted with the *blutige* operation, are very satisfactory, as shown by Lange, Trombetta, and Stintzing, who adds a clinical chapter after his experimental results. It is there stated that this method of stretching the sciatic for tabes dorsalis in four cases turned out admirably in one, produced decided improvement in the second, partial improvement in the third, and a little less improvement in the fourth, so that, in fact, there are means of stretching sciatic nerves successfully without the cutting operation. Again, quite recently I lit upon some observations made by Motschutkowski with reference to what happens in the use of Sayre's apparatus for suspending the body. The body is said to be elongated from an inch to two inches and a quarter—that is, the entire body, but he found the trunk was elongated nearly to seven-eighths of an inch. He opened the spinal canal, and then suspended the body in the same way, and he found that the spine itself was elongated seven-eighths of an inch; but he found as confirmatory of what I have already told you, that although the membranes moved, and he thought there was a slight amount of tension on the posterior roots of the nerves, he was not quite sure of that, and at all events it was a very slight degree of tension. But suppose there was a degree of tension; consider the amount of stretching that he was now employing,—a stretching which was acting on every part of the vertebral column, not limited to the sacro-lumbar part alone, and it is just possible in this way by stretching the entire vertebral column and undoing its curves, he did get a certain amount of tension on the posterior roots of the nerves, and therefore on the cord. His practical application of this consisted in suspending the patients suffering from locomotor ataxy for ten minutes at a time three times a week. He reports fifteen cases; in thirteen cases there was positive diminution of the pains, as well as of the abnormal sensations which characterise that painful disease, some decided improvement in the ataxic condition, and general recovery of muscular power. In thirteen cases, without going into detail, this method of stretching nerves has succeeded in relieving agonising pains of tabes or locomotor ataxy. In two cases, it produced either no result or a very unobservable result.

With regard to the dangers of nerve-stretching in tabes, if you read the cases, you will find that they are comparatively few. One patient died from chloroform, another from thrombosis in the veins, another from pyæmia due to inattention to the antiseptic dressings, a fourth from a similar cause. Then we may record three or four cases in which undoubtedly the death may be attributed to disease of the spinal cord set up by nerve-stretching, but one of these was a case of spasmodic disease. These mishaps have taken place in other operations. A boy had his hips and knees contracted; he had these stretched; he had collapse and died in two or three days; hæmorrhages were found along the cord. Shampooing even has been found to result in a fatal issue, no doubt from an imperfect mode of performing it. If therefore I conclude by saying that nerve-stretching demands much further consideration, and that the facts already brought to light upon the subject serve to illustrate more clearly the mode in which it acts, and to indicate that there should be one mode of treatment for neuralgia and another mode for tabes, I trust we may hope that in future this operation will take its place more prominently in English surgery.

I will conclude by thanking Mr. Horsley for his very great assistance, also my old house-surgeon, Mr. Thring, for collecting the University College Hospital cases for me, and Mr. Castaneda for his great trouble in verifying the tabulated cases. I again repeat that I shall hope, if I publish this lecture, to furnish such appendices as I believe will fill up gaps which for want of time I have been compelled to leave open.

Once more assuming my position as President of this College, I beg to thank you most sincerely for your attendance here to-day, to express my obligations to the Members, Fellows, and Council for the honour they have done me, and also to say with regard to our Visitors, that they have undoubtedly by their presence contributed to our attempt to pay a just tribute to the memory of the lady who founded these lectures, and also to keep alive the recollection of the physician in whose honour they have been founded.

ON

SOME HITHERTO UNAPPRECIATED FACTS IN THE ANATOMY OF THE VENOUS SYSTEM.[1]

BY JOHN GAY, F.R.C.S.

IN this paper I wish to draw attention to some hitherto, I believe, unknown anatomical facts that bear upon doctrines with which we have long been familiar, but the foundations of which, being laid during what I may call the transitional period of anatomical research, may very reasonably become subject to modification if rightly transferred to some other and more substantial basis. Since 1837-38, when the Lettsomian Lectures, on some special diseases of the veins, were delivered by me, I have devoted considerable attention to the further study of the venous system. This has been more than repaid by the abstract enjoyment I have derived from that source. The facts I am about to relate are the results of a series of experiments by injections, conducted for a long time past with every effort to render them exact, intelligible, and trustworthy. The conclusions at which I have arrived, and of which I can entertain no doubt or question, relate mainly to the free anastomosis of veins of the trunk even in parts where valves exist and might be supposed to interfere with such freedom of intercourse. I began the series in the human subject, then I took monkeys, and subsequently, to satisfy myself of the inferences they yielded, had again recourse to human anatomy. After trying a variety of injections in monkeys, which failed of their purpose on account of their dying from disease (usually phthisis), I got a macaque from the Zoological Gardens that died apparently without any pathological lesions that could stand in my way, and Mr. William Pearson at the Royal College of Surgeons injected it with wax. This he did with a certain amount of success, enough for my purpose, although my friend Professor Flower was good enough with his critical eye to see defects, and to draw my attention to them. The injected specimen [shown], when fresh was a very beautiful object; Professor Humphry, Sir James Paget, and other anatomists, including Professor Flower, examined it carefully, and I think admitted the success, as far as it went, of the injection. But it has suffered from the attempts to preserve it; still, I hope it contains evidence of the points I desire to establish. Prior to and since that injection I have had opportunities of repeating the experiment in the human subject at Mr. Cooke's admirably contrived and well-stocked anatomical studio, in a little burial-ground near the Foundling Hospital. To my friend Mr. Cooke, and the means afforded me by the resources of his interesting and comparatively perfect retreat, I am to a very large extent, and indeed well nigh exclusively, indebted. The injections were made and followed by a sectional display of the vessels and parts by Mr. Montille, recently of Professor Humphry's Museum at Addenbrooke, and now at that of St. Thomas's Hospital, to whom I am much indebted; as well as to Mr. Pearson, to whom I am beholden for the opportunity of showing the macaque before you.

The results of these injections exactly correspond, and will, I trust, help to lay the foundation in some important respects of the new reading of vein anatomy to which I have alluded, and to which I will now direct more particular attention. As it bears considerably on the azygoid and related systems, I will first offer a few remarks on their historical anatomy, with the hope of showing the excellent work done in that department on the revival of learning in Europe, especially in Italy and farther east. At the end of the second century the learned physician of Pergamus founded anatomy by observation and made it a science. But he imperfectly understood the nature or uses of the azygoid veins. It was not until the time of Eustachius that these veins became known; he published a series of plates on their anatomy, and was followed, as I learn from Professor Huxley, by Volthier Coiter, of Groningen, who improved our knowledge of them, and at the same time invented that much, and in some respects well, abused practice of vivisection. Fabricius of Acquapendente followed up the inquiry until we come to Canini, who still more thoroughly examined these vessels, and first brought to light the fact of their having valves; and onwards to our immortal Harvey, who gathered up all the fragments of knowledge that had been collected by these great masters, and landed them on the *terra firma* of the great discovery of the circulation.

At the present time, a latent suspicion has been awakened in favour of physiological research as the means of advancing the science of healing and the practice of medicine, rather than in that of consolidating its basis through the elucidation of what is still obscure and has been least explored in our knowledge of anatomy, and an exact record of the results of such researches. To this view I am tempted to demur. Both are good, but perfection in anatomical details must antedate and form the basis and substratum of all physiological advance. The oscillations in the progress of physiological science, as well as all rightful progress in the art of medicine, correspond very much with the fluctuations in the advance of anatomical science. It is not my design to attempt to add to or improve the knowledge we possess of the anastomotical relations of the smaller veins as given in the excellent and trustworthy works of Gray and Quain, well known to everyone. These veins form a network of intercommunication throughout the body. Every venule and vein contributes to blood extradition from its capillary reservoir and its full discharge into the systemic veins, with a certain and co-ordinate amount of free oscillation in order to provide against casual or designed obstruction. In its way to the heart this course of the blood-streams is marvellously provided for by the arrangement of the sinuous and often angular channels which conduct it. Here I must interpose the statement that all the trunk veins, like the muscular or axial veins of the extremities, appertain to the systemic system, whilst the collateral are exclusively, and without exception, cutaneous or superficial veins. If you want to get any communication between portions of the systemic veins most remote from each other, you will have to deligate the cavæ at their entrance to the heart and above their chief trunks, and trust to cutaneous channels for its re-establishment.

My first statement bearing upon the facts shown in this monkey is that if you inject a tributary vein in any part of the body, as, for instance, of the internal mammary in the trunk or in the limbs, and in any direction either backwards or centripetally, the injected fluid (if thin enough for permeation) will fill every vein throughout the body, and extend into its finest ramifications. The macaque exhibited is the proof to which I refer. You will observe that there is no vein or vein twig that is not fully injected, and from that one point—viz., the internal mammary. This I conceive to be a new fact in connexion with the vein circulation. I have put its proof to the test by a considerable number of experiments, and in no one instance have I failed, provided the animal experimented upon was healthy. In order to prove the communications, even where these are apparently exposed to valvular interruption, as in the azygoids, its vessels must be injected by two distinct methods and from different points: first, forwards from an iliac, renal, or sacro-lumbar—a systemic, vein; and then after tying its trunk in another subject, backwards or in a direction opposed to the natural current, from the orifice of a remote collateral—e.g., an internal mammary, or internal jugular, vein. I have caused these methods of injecting this department of the vein system to be adopted several times. In the first the injection will be checked by the valves at the junction of the thoracics with the intercostals, whilst in the second it will take a circuitous route and fill the void costal portions. The next point is that the injection in taking this course fills every interposing organic structure. It will traverse the lungs, liver, kidneys, and, as I have every reason to believe, the spleen, supra-renal capsules, the thyroid, and other organic structures. The third is, that it does not follow that because one large organ, such as the liver or even other parts or organs of the body, are thus injected, all should be equally so filled. In the case of a subject injected by Mr. Montille (at present lying in Mr. Cooke's studio for observation by anyone desiring it), the lobules of the liver were completely injected from the jugular and femoral veins, but no part of the fluid had passed into it by the portal vein. This vein was empty. And this is quite intelligible, for the course of the injection might be first through the superior, which receives the trunk of the inferior, phrenic, and passes by a single conjoint vein into the external hepatic vein and the

[1] Paper read at the Medical Society of London, Nov. 26th, 1883.

liver. The phrenics anastomose freely with the lower intercostals, and thus the mammary blood can flow into the heart through the azygoids. The spermatic vein on the right side, as is well known, passes into the superior cava, and on the left into the renal as well. The injection might also fill the inferior hæmorrhoidal. This completes the proof that the whole of the vein blood from the nearest to the most remote parts of the trunk has free access to the hepatic globules without being dependent on the portal veins for its conduct, so that it would appear that these veins are not exclusively portal to that organ. By the network already alluded to, the liver is accessible to the vein-blood equally from all parts of the system.

The bearing of this inquiry on physiological science is far from being remote as to its consequences. It shows that blood depuration by organic textures does not depend so much upon the means of access to the liver and other depurating organs of the blood from every part of the body, as upon the healthy performance of their functions. Any interruption to either the first or second of these necessary conditions will be followed by marked local evidence, such as skin sallowness, corresponding with the area over which they have failed of being fulfilled.

ON THE RELATION OF DISORDERS OF THE FEMALE REPRODUCTIVE ORGANS TO INDIGESTION.

BY GEORGE ELDER, M.D.,
SURGEON TO THE HOSPITAL FOR WOMEN, NOTTINGHAM.

DURING the child-bearing period of female life there cannot be a doubt that many of the pathological puzzles which the sex presents to the medical observer find their solution in a deranged condition of the organs of reproduction. Of these reflex phenomena, there are none which come more frequently under our view than disorders of digestion; and when these follow upon apparent and recognised diseases—as, for example, pelvic abscess, ovarian prolapsus or disorders of the endometrium—the causal relation is obvious. But what I wish to draw attention to in this paper is that there are many cases of uterine derangement undetected and unrelieved, because the superimposed stomachic troubles, by their prominence and persistence, overshadow the primary malady. In these cases, more frequently than not, there is no suggestion on the part of the patient of other derangements, beyond those for which advice is sought; and in many it is only after long and fruitless trials of anti-dyspeptic remedies—ordinary and extraordinary,—diet, change of air, &c., that the true nature of the case is arrived at; or more often it is classed under the convenient but very vague heading of a "neurosis," and, with a few wisely phrased general directions, relegated to the list of "chronics."

The lack of information on this subject, not only in our standard works on general medicine, but also in gynæcological literature, must necessarily have contributed to the errors of diagnosis of which the subjects of these derangements are so frequently the sufferers. Time and space would alike be misapplied were I to enumerate the list of authorities of which this might be said; but it will be sufficient for my purpose to cite amongst books on systematic medicine the twelfth volume of Ziemssen's Cyclopædia and Bristowe's Practice of Medicine—both well-known and deservedly appreciated treatises,—where hardly any reference is made to disease of the reproductive organs as a factor in functional dyspepsia; and amongst special works may be named Barnes's Diseases of Women and the first volume of Ziemssen's series treating of the Diseases of the Female Sexual Organs, respecting which the same comment might be made. It might be thought that rarity of occurrence is the reason why these cases should not be afforded opportunity for being discussed; but that this is foreign to the truth is borne out by the following extracts from Russell Reynolds and Henry Bennet. In treating of the etiology of dyspepsia in his System of Medicine, the former says: "And with a frequency far exceeding that of all those just enumerated must be mentioned diseases of the uterus," &c. Whilst the latter, in his work on Inflammation of the Uterus, expresses himself thus: "So continually do I observe dyspepsia under these circumstances that the very existence of severe disorder of the digestive functions in a young female, without any apparent cause, always induces me to question narrowly the state of the uterine functions."

So far as my experience goes these cases are not uncommon, and from the reason that the prominence of the stomachic symptoms is apt not only to mislead the patient as to the organ at fault, but also the medical attendant, their true significance is overlooked. Both the unmarried and the married present examples of these derangements, and between the minor instances in which slight nausea or sickness on rising in the morning, after a fatiguing walk, or during menstruation, is complained of, and those in which stomachic irritability or persistent pain threaten life by inanition, there are manifold degrees of severity. So closely do they sometimes counterfeit ulcerative change that I have known cases in which malignant disease had been diagnosed when direction of the treatment to the local uterine trouble soon changed the complexion of affairs. The narration of two typical illustrations of the most severe variety may here be useful in giving point to my remarks.

The first was seen in consultation a few years ago, and occurred in a woman between thirty and forty years of age, who had borne several children. When visited she was extremely emaciated and feeble by reason of persistent sickness. For weeks she had been confined to bed, and her sufferings, which were acute, were all referred to the epigastrium. The gloomiest of prognoses had been given, and treatment was confined to attempts at palliation. There was a history of a somewhat recent abortion from which her troubles dated, and a vaginal examination showed the existence of a subinvoluted and anteverted uterus. At present this woman is in good health, a witness to the accuracy of the diagnosis and the success of the treatment based upon it. A second I saw a short time ago, when the symptoms were, although not so severe, almost parallel, but in a newly married woman with stenosis of the os uteri and anteflexion. Here also neither the medical man nor the patient suspected the existence of any uterine trouble, but its treatment was coincident with an improvement in the condition of the patient, which soon culminated in complete recovery.

These cases agree in having their symptoms accentuated by fatigue, menstruation, coitus, &c., and also in being scarcely if at all benefited by the remedies in vogue for ordinary indigestions. Frequently also the history of the illness assists us in making a diagnosis. It may be traced to a previous labour at full term, or an abortion, or there is evidence of disordered menstrual function. With regard to the kind of uterine mischief most commonly found underlying these cases malpositions occupy the chief place, and of these forward versions and flexions. The most pronounced examples I have found in anteversion and anteflexion.

The treatment of these cases is necessarily that of the original malady, and the declension of the reflex phenomena is gauged by the measure of its success.

Nottingham.

REMOVAL BY VAGINA OF AN OVARY ADHERENT IN DOUGLAS'S POUCH FOR SEVERE DYSMENORRHŒA; CURE.

BY J. GREIG SMITH, M.A., F.R.S.E.,
SURGEON TO THE BRISTOL ROYAL INFIRMARY.

IN the discussion on oöphorectomy at the International Congress in 1881, Dr. Savage, of Birmingham, is reported to have said: "It has been considered to be a *sine qua non* for the benefits to be derived from oöphorectomy that both ovaries should be removed; but there are some few cases where the disease is strictly limited to one side, and where I believe the removal of the affected ovary would be effectual. In suitable cases—such, for instance, as one of prolapse of the ovary only—I intend to put this plan to the test; for this purpose, I take it, the local symptoms should be very clearly defined and limited, while at the same time there is an absence of prominent general symptoms." Such a case is the following; its rarity, and the satisfactory result of the operation, may justify its publication as an isolated case.

M. B——, aged eighteen, a servant, began to menstruate at thirteen. Not once during her five years of menstrual life

had her periods been free from pain. Latterly these pains had greatly increased. During the flow, which lasted a week or ten days, she was completely incapacitated for work; while in the intervals, which rarely were longer than a fortnight, she suffered from a constant dragging pain in the back. During those five years she had had a constant leucorrhœal discharge. Within the last six months severe pain during defecation—so severe as to make her faint occasionally—and increased frequency of micturition were added to her other troubles. Her life, she said, was a burden to her, and she was most anxious that something should be done. She had been under varied and skilful treatment before applying at the Bristol Infirmary. She was a quiet, sensible, somewhat phlegmatic girl, and not in the slightest degree "hysterical." Her history suggested no apparent causation for her troubles, unless a fall from a ladder when she was twelve years old could be so reckoned.

On examination while the uterus was drawn down, the forefinger being in the vagina and the middle finger in the rectum, I detected what I believed to be the right ovary prolapsed and adherent in Douglas's pouch. It was exquisitely tender on being compressed between the fingers. By pulling it downwards the ovarian ligaments could be made out tense and distinctly perceptible. The swelling on being pushed upwards dragged the vagina and rectum with it, and returned at once when force was removed. The left ovary was doubtfully made out in normal position, and not tender on pressure. Palliative treatment was tried for two months. A retroverted uterus was kept in position by a pessary; her bowels were regulated by chalybeate aperients; hot-water douches and local depletions were instituted—all without benefit.

On May 22nd, 1883, I determined to try to remove the ovary through the vagina. The vaginal method was selected because I believed the adhesions were so strong, and the position of the ovary was so deep, that I should not in all likelihood be able to complete the operation by abdominal section. With reference to this point Dr. Savage says:—"Any case incapable of removal per abdomen would, I feel certain, fail per vaginam." On the other hand, it must be noted that in the hands of such a skilled operator as Dr. Savage himself five out of forty operations by abdominal section had to be abandoned as impracticable. The chief difficulty after removal would probably arise from bleeding; this, if troublesome, I thought I could control by temporary compression with a long flat forceps, one blade being in the rectum and the other over the bleeding surface. The vagina was prepared by daily syringing with a 5 per cent. solution of carbolic acid and was kept stuffed with iodoform wool for five days before the operation.

Immediately before operation the whole of the external genital organs, as well as the interior of the uterus, were thoroughly purified with carbolic lotion. The uterus was dragged downwards and forwards by a vulsellum attached to its posterior lip, and the mucous membrane and areolar tissue behind the neck divided by scissors. A Lister's sinus forceps was then pushed through the peritoneum and its blades separated. Through the opening thus made the forefinger was inserted into the abdominal cavity, and the ovary detected in the position described. With the finger nail the adhesions were gently torn through from above downwards. After it was detached the middle finger also was inserted into the abdomen, and the ovary seized between the two and pulled into the vagina. Here it was caught by a vulsellum and easily removed from its attachments after they had been surrounded by two catgut ligatures. No stitches were placed in the wound. The vagina was stuffed with iodoform wool.

The further history of the case is absolutely uneventful. The wool was changed daily for a week, and the vagina and vulva carefully washed with carbolic lotion. On the seventh day the bowels were moved after castor-oil—the first time she said for many months without pain. On the tenth day a slight show of blood from the uterus appeared, but lasted only twenty-four hours. A true menstrual period of three days' duration came on ten weeks after operation, and was absolutely painless. The process of recovery never gave reason for the slightest anxiety. She left the infirmary promising to return should there be any recurrence of the old pains. She returned once in August to report increasing strength and continued freedom from trouble. Since then she has not appeared, so it may be concluded that she is now well.

The ovary was puckered on the surface, small and hard. On section, it was studded with minute aggregations of small, round cells, which stained deeply with logwood, and might be described as miliary abscesses. The ovarian stroma was everywhere infiltrated with numerous nuclei. Several stunted Graafian follicles were seen; and at one portion of some of the sections were several curved rows of nucleated columnar cells regularly arranged as in a cylindroma, and forcibly suggesting the origin of a cystic growth.

Clifton.

ON THE

TREATMENT OF VIOLENT DELIRIUM IN FEVER CASES.

BY JAMES W. ALLAN, M.B.,

SUPERINTENDENT AND PHYSICIAN, CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE.

THE management of violent delirium constitutes one of the most difficult tasks of those having the charge of fever cases. The following remarks are meant to apply to typhus and enteric, and to severe attacks of delirium in these diseases.

Mild muttering delirium clearly does not call for active treatment; it is best met by such gentle measures as shaving the head, applying evaporating lotions to the scalp, sponging the skin with lukewarm water and vinegar, &c. Even that form of delirium, common in typhus, in which the patient insists on getting out of bed to go to his work, &c., may generally be controlled easily by a skilful nurse, who has only to use persuasion and gentle restraint to keep the patient in order. Sometimes such cases insist on sitting on a chair by the fire or going round the ward on a tour of inspection, and I have known an old and experienced nurse gratify these whims with the best possible result. The patient gladly returns to bed after the exertion, feeling tired in body but satisfied in mind, and frequently falls into a refreshing sleep. Of course such liberties could be accorded in certain cases only, and under the personal supervision of an old experienced nurse. The cases which are difficult of management are those in which the delirium assumes a wild or fierce character. The worst cases of all are those in which there is pulmonary complication. When a muscular young man is seized with violent delirium at an early stage of illness, before his strength has been seriously impaired, great trouble is usually in store for those in charge. As a rule, the patient is in a state of terror or apprehension. He thinks that he is in danger of being murdered, or he believes that he is about to be consigned to hell fire. He is simply desperate, and this constitutes the great danger of the case. Sometimes he is cunningly planning his escape. At this stage he must be closely watched. There is a peculiar look about the eye, not easily described, but once seen readily recognised again. There is also change of manner, questions are answered abruptly, or an obstinate silence is maintained. The man is in a dangerous state; a violent attack may occur at any moment. Every trivial action, every careless word of the attendants, has for him a sinister meaning. Without warning he may spring from the bed and dash through a window. The probability is that the patient has not slept for some time, and, recognising his dangerous condition, the medical attendant is naturally anxious to administer a draught, so as to secure deep refreshing slumber. But, to his great annoyance, the patient absolutely and doggedly refuses to swallow a drop, and for the very good reason that he believes an attempt is being made to poison him. This reminds one of the notions of the insane; and there can be no doubt that the delirious patient is temporarily insane. It may be that the attempts to get him to swallow the draught have roused the man to active resistance, and his violence may be so extreme as to necessitate the help of several persons and the application of mechanical restraint. The latter should never be resorted to where it can possibly be avoided; but when it must be employed, let it be done quickly and effectively. Plenty of help should be obtained, for if the patient is strong, and one or two persons try to put him under restraint, the result may be a severe and prolonged struggle between the patient and attendants—an exasperating kind of exertion which is bad for all concerned. The patient should be gently but firmly overpowered, when, as a rule, feeling helpless, he will submit. The "jacket" and "sheet" should then be

employed, great care being taken to make sure that the long sleeves of the jacket are bound firmly round the patient's wrists, otherwise he will withdraw his hands and soon set himself free. When the jacket and sheet have been properly adjusted the patient is secure, but it is not desirable that he should be kept tied up a minute longer than is necessary. If he still refuses to swallow the draught what is to be done? A hypodermic injection of morphia might be given, but I confess to a prejudice against this practice in fever cases from a fear of causing local irritation, boils, &c., and, besides, the pain inflicted by the thrust of the needle, though slight, would confirm the patient in his belief that he was in the hands of the enemy.

I find the following method to work well:—Morphia suppositories are administered till the patient becomes quiet and drowsy. He is then manageable. The jacket and sheet can be removed, and warm dry flannels, &c., put on. The probability is that he can now be got to take a draught, or at least to swallow passively. If he still refuses, morphia suppositories can be administered as required. As to the nature of the draught, I may state that I adhere to the hydrate of chloral, long ago tried and recommended by Dr. James B. Russell in the treatment of fever cases. When there is simply insomnia twenty or twenty-five grains of chloral hydrate in syrup (repeated, if necessary, in an hour) generally secures good sleep for an adult. When, however, there is violent delirium the addition of five or ten minims of solution of muriate of morphia causes the end in view to be more rapidly and effectually attained. But this combination of chloral and morphia is well known to be a formidable one; it requires to be carefully administered, and the effects must be closely watched. When the narcotics require to be given for a long time on account of persistent delirium, it is convenient to prescribe a mixture, each dose of which contains ten grains of chloral and five or ten minims of solution of muriate of morphia, the interval between the doses being determined by the effect produced. Respiratory embarrassments, lividity of nails, &c., are serious contra-indications to the use of narcotics. When suppositories and draughts have both been given in a case, this should be well borne in mind so as to estimate the combined effect. In the treatment of violent delirium in fever, narcotics wisely given may save life; improperly given they may hasten, or even directly cause, death. In prescribing them no routine practice can be adopted, and their administration demands the most careful personal supervision of the physician in attendance.

Belvidere.

TWO CASES OF HÆMATOCELE OF THE TUNICA VAGINALIS, THE ONE CHRONIC, THE OTHER ACUTE.

BY JAMES PATON, M.D.,
SURGEON TO THE GREENOCK HOSPITAL.

CASE 1.—P. R——, a labourer, aged sixty years, was admitted to the medical ward of the Greenock Infirmary on Feb. 23rd, 1883, for some obscure pain in the back. In the course of examination the house-surgeon detected a large scrotal swelling. On the 25th I was requested to see the case. The swelling was the size of a large cocoa-nut, pyriform in shape, and on tilting up with the hand felt very heavy. The skin was freely movable over the whole mass, with no external discolouration. There was no pain on manipulation, except at a small space at the lower and posterior part of the swelling. The cord could be distinctly felt at the external ring; no impulse on coughing. The feeling on palpation was more that of solidity than of deep fluctuation, so much so that I at first was inclined to the diagnosis of sarcocele. There was no transparency. I obtained a small Southey's exploring-needle, by which some very dark, porter-coloured fluid escaped, which contained abundance of cholesterine. The man's own account of the previous condition of his scrotum was indefinite, and rather untrustworthy, but, so far as can be made out, it would seem there has been a swelling for about forty years. He noticed his scrotum begin to swell when about twenty years of age. Two or three years afterwards he met with a railway accident, by which he was very severely injured, having one of his legs broken, and otherwise severely bruised. After this accident he states that the swelling was constantly present to some extent, but coming and going; and he distinctly affirms that when exposed to cold or walking about it became decidedly less, and increased again as soon as he lay down and got warm in bed. About two years ago he got intoxicated one evening, and in the morning when he awoke he found his scrotum very much distended, discoloured, and painful; whether he had been hurt by a fall or blow he could not say. The swelling has never been subjected to any interference whatever. The diagnosis was that of chronic hæmatocele, for which extirpation was proposed to the man, and to which he willingly assented. Accordingly, on March 2nd, I removed the tumour by an elliptical incision, beginning at the external ring, including a large piece of the scrotal integuments, dissected down to the tunica vaginalis, from which the scrotal structures were easily separated. The cord was tied with chromicised catgut. The whole was done with the usual aseptic precautions. Unfortunately during the night, being somewhat restless, he disarranged the dressings, leaving the lower part of the wound exposed. It was then dressed with a glycerine solution of carbolic acid, and afterwards with simple boracic dressings. There was little or no constitutional disturbance, and the wound healed up entirely. On cutting into the tumour after removal the cavity was found filled with the beforementioned fluid. The walls of the tunica vaginalis were very much thickened, in some places half an inch, presenting a laminated appearance, and feeling cartilaginous. At the lower and posterior part of the tumour was found the testicle, disorganised, and embedded in the thickened walls, this being the spot where he experienced pain when touched. The internal surface of the tunica was corrugated, or rather nodulated, with masses of fibrinous coagulum adhering to the wall. I should have stated that the sphygmographic tracing was distinctly senile.

CASE 2.—Mr. McG——, aged sixty-six years, retired. Has had hydrocele for nine or ten years, which he attributes to an accident by falling on the bitts of a yacht while pulling in a rope which broke. Has been in the habit of getting it tapped once a year or so. He had no pain or uneasiness beyond the inconvenience of the size and weight of the swelling. On April 17th, 1883, some fowls belonging to a neighbouring proprietor had come into his garden (which they were in the habit of doing), and he made a rush at them, caught one, and was in the act of twisting its neck, when unfortunately he squeezed his hydrocele, by his own legs twisting in some way. He immediately experienced acute lancinating pain, and discolouration of the scrotal textures ensued. Three days after the accident my friend Dr. Wylie, of Gourock, tapped and evacuated about half a gill of dark clotted blood. The swelling went on increasing till May 1st, when Dr. Wylie asked me to see him. I advised the laying of the sac open, to which the patient consented. I laid the cavity freely open, evacuated all the blood-clot, and thoroughly washed the cavity with a weak solution of iodine. The testis and cord were distinctly seen. Strips of lint soaked in carbolic oil were then inserted. No constitutional disturbance of any consequence occurred. The wound granulated from the bottom and healed up kindly. In this case the sphymographic tracing was also senile. There is now only the linear cicatrix from the incision, and he says he can freely move the testicle up and down.

Remarks.—These two cases represent the chronic and acute forms of hæmatocele of the tunica vaginalis. In the chronic case it is difficult to say how long it had been a hæmatocele. But from the pathological appearance it must have been of some years' standing. Probably it occurred on the evening when he became intoxicated, and from the senile condition of the bloodvessels, rupture taking place from a fall or blow; just as in the acute case, rupture took place from the senile condition of the vessels, at least the tendency to rupture was increased by such a condition.

Greenock.

OCCLUSION OF BOTH URETERS; DEATH BY SYNCOPE.

BY J. VINCENT BELL, M.D., F.R.C.S.,
CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

F. F——, aged forty-nine, inclined to be corpulent, but of temperate and regular habits, had occasionally passed small calculi, which he could trace by their symptoms between the kidneys and the urethra. On the evening of Friday, October 26th, he sent for me, saying that he had passed no

urine since early on Thursday morning; he felt sure that his bladder was empty, and that a small calculus had got impacted in his right ureter on Wednesday, and one in the left ureter on Thursday morning. I percussed the abdomen and found no evidence of retention in the bladder. On Saturday the 27th I found him complaining of slight pain in the loins, but without bladder uneasiness. However, I thought it best to pass a catheter, and introduced a No. 10 silver. Finding the bladder empty and collapsed, I prescribed aperients and diaphoretics, with warm baths. The treatment was continued for two days by my brother, Mr. Albert Bell, who watched him during my absence from home till Monday, the 29th, when I saw him about noon. He was sweating, and had a distinct urinous odour in his breath and skin, but was almost free from pain. There was no alteration in his symptoms in the evening or on the next day, except that his wife said he twitched a good deal when asleep. On the Tuesday morning I asked my friend Mr. Nankivell to look at him with me. He thought the best hope was in continuing purgatives and diaphoretics, whether the mischief was actual suppression of urine, or, as seemed to me more probable, reabsorption from blocked ureters. On Wednesday the 31st I found him little changed, and he told me somewhat hopefully that he thought there were some signs of coming relief; he felt sure the calculus in the left ureter had nearly reached the bladder. He was weak, but quite sensible, and I told him to keep quiet and to take some spirit-and-water occasionally if he felt faint. He asked if he should go downstairs, but I told him that would be very unwise, and he did not do so. I went down to the house about 6 P.M., and was told that "he had just that moment gone." He was sitting up talking on business to his brother when he complained of feeling faint, was given some brandy, said "I am going," and died instantly.

The friends consented to an examination of the kidneys, ureters, and bladder, but did not wish any more organs to be disturbed than was absolutely necessary, so the inspection was limited to the urinary organs. Both kidneys were enlarged to about double their normal size, congested and friable. There was a calculus of the size of a peach-stone in the infundibulum of the left kidney, and one about half that size in that of the right kidney; also two or three quite small calculi (scarcely as large as peas) in other parts of the kidneys. I suppose about one and a half ounces of urine escaped on section of the left kidney, rather less than one ounce from the right; the ureters were both blocked. On the right side a calculus was impacted about an inch above the bladder, whilst in the left ureter a less firmly impacted calculus had less than half an inch to travel, and seemed as if it might have escaped into the bladder within another day, if only that fatal syncope had been avoided.

The noticeable points in this case seem to me to be the rare coincidence of blocking of both ureters, the recognition by the patient of his own condition and the cause of it, and the death by fainting on what appeared to be the eve of recovery. The question whether any operative measures should be adopted presented itself to us; but the difficulty and danger of trying to relieve the ureters with a collapsed bladder in a patient sliding into uræmia seemed to make the likelihood of a favourable result from such interference smaller than from a more expectant plan, and I think that the narrow escape from recovery which he apparently had justified our decision

Rochester.

CASE OF

SUPPURATING HYDATID OF ABDOMEN; FREE INCISION; RECOVERY.

BY F. FELIX JONES, M.R.C.S. ENG., &c,
LATE SENIOR HOUSE-SURGEON, GUY'S HOSPITAL.

ON August 1st, 1881, I was called to see R. T——, aged fourteen, a slenderly-made youth, who had previously enjoyed good health. The history of the case was that he had taken cold about a week before; this was followed by rigors and tenderness over the abdomen, with gradual enlargement. No vomiting, bowels constipated, urine clear and scanty. Temperature normal. Circumference of abdomen 30½ inches. Well-marked thrill; dulness on percussion over front and sides, as if the intestines were pushed upwards away from the abdominal wall.

August 4th.—Circumference of abdomen 31 inches Vomiting everything. Great pain in the back. Temperature normal.—5th: Paracentesis was performed in two places in the linea alba below umbilicus, and four quarts and a half of thick creamy pus were evacuated. From this time all bad symptoms ceased, and the boy made a good recovery.

In April, 1883, I was called to see the same patient, whose abdomen was again distending slowly and uniformly, more in front than at the sides, and simulating in appearance an ovarian tumour. No abdominal tenderness.

May 10th.—As distension had increased rapidly, and the patient was much emaciated, I aspirated the abdomen in the linea alba, but no fluid came away. I tried a small trocar with the same result, the cannula being blocked up with gelatinous material. The following day a large sized trocar was used under chloroform, and about three quarts of creamy pus were removed. The swelling subsided, but there was great pain in the back. Ordered one-grain opium pill every four hours. In a few days the tumour commenced to refill.—24th: While in the act of defecating, a quantity of pus and small hydatid cysts were expelled through the opening in the abdomen.

June 1st.—Chloroform having been administered, I made an opening one and a half inches in length in the linea alba, an inch below the umbilicus, and opened the tumour; a large quantity of pus, hydatid fluid, and cysts, varying in size from a cocoa-nut downwards, was expelled. I passed my finger into the cavity to remove more cysts and to explore its direction; I found it apparently connected with the pelvis. The cavity was then washed out with a weak solution of carbolic acid and a large-sized drainage-tube inserted. Ordered one-grain opium pill, every four hours, and a liberal diet of wine, milk, beef-tea, &c. The patient appeared very prostrate after the operation. The cavity was washed out twice daily, iodine lotion being substituted for carbolic, and several more small cysts came away. The temperature for the next week only once rose over 100°. An epidemic of scarlatina existed in the town at that time, and unfortunately my patient was seized with it; but, notwithstanding that serious complication, he pulled through satisfactorily, and on July 18th, when desquamation had ceased, was able to go about. On Oct. 18th I saw him again, and he looked quite rosy and was in excellent health.

Llanfyllin, N. Wales.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullaautemest alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

ON A NEW METHOD OF EXPOSING THE KNEE-JOINT IN ORDER TO REMOVE PULPY DEGENERATION OF THE SYNOVIAL MEMBRANE.

(Under the care of Mr. H. ROYES BELL)

THE following case formed the subject of a communication to the Medical Society of London on Dec. 10th, 1883.

The patient, Charles T——, aged twenty-seven, single, a barman living at Woolwich, was admitted into Fisk ward on Feb. 7th, 1883, suffering from disease of the right knee-joint. Five years ago he had an attack of pleurisy in his left side. His father died of phthisis, but his mother and three sisters are healthy. In the winter of 1881 he caught cold from having been obliged to work in the wet, as the Thames had overflowed and inundated the public-house where he was employed. Severe pain came on in the right knee-joint, which swelled up, and obliged him to keep his bed. In a few days it became less painful, and he consulted a chemist; but, getting no better, he went to the Plumstead Infirmary in Sept. 1882. His limb was placed on a back splint, blistered, and eventually fired with the actual cautery. Here he remained for ten months, but finally returned home.

When admitted into King's, he was a tall, pale, thin, delicate-looking man, in the habit of indulging in much alcohol. His right knee was swollen, stiff, and painful; he could just manage to walk with the aid of two sticks. There was little or no effusion into the joint, the swelling being due to

thickening of the synovial membrane. The joint was painful at night; it started also, and was more painful after examination. Recognising the value of the antiseptic method of operating in these cases, it was resolved if possible to remove the diseased synovial membrane only. In order to do this effectually, and at the same time to be able to convert this, a partial operation, into the more complete and radical one of excision of the knee-joint, on Feb. 24th a transverse incision was made, which passed over the middle of the patella, as for excision of the joint, only a little higher up, through the soft parts, from one condyle to the other. The patella was sawn transversely across its middle, then by dividing the soft parts forming its capsule the interior of the joint was freely exposed. (The lateral ligaments are not necessarily cut, and if care be used to carry the incision above the semilunar cartilages these also may escape injury.) In this case, having cut the external semilunar cartilage in making the incision into the joint, it was removed, and also the internal, although they did not appear to be diseased. A large mass of thickened synovial membrane was found under the ligamentum patellæ, and also under the quadriceps extensor tendon above the patella. There was some soft red-looking material on the crucial ligaments, which was scraped off from them. On examining the articular cartilages no morbid changes were observed. Esmarch's elastic band had been used; this was now relaxed, and all bleeding vessels secured. The sawn patella was brought together by one silver wire suture, the wound closed, antiseptic dressings were applied, and the joint placed in a back splint (McIntyre). The silver wire was brought out through the incision, and subsequently (April 10th) removed, the patella having united.

The patient progressed favourably for about three months and a half, the wound having healed, and the patient getting about very well on crutches, and wearing a back splint. He had quite lost the old gnawing pain and the nightly startings. On one occasion he went out, and unfortunately visited a public-house and got tipsy; the next day he was much upset by his carouse, and from that time the pain and startings of the limb returned. He readily consented to the proposal that the knee-joint should be excised, which was done on June 16th, about four months after the performance of the first operation for the removal of the pulpy synovial membrane. He has at the present moment a straight, firmly anchylosed knee-joint, with but very little shortening of the limb. The patella is seen on section to have quite united by bone, there being no evidence of a section having been made except at its articular surface, which is a little irregular. The articular cartilage has been in places supplanted by fibrous tissue, which fixed the patella to the femur. The articular surfaces removed from the femur and tibia show extensive ulceration of the cartilages, which has taken place subsequent to the first operation. It is thought that this transverse section of the patella enables the surgeon to examine thoroughly the condition of the joint and to remove more effectually than can be done by the lateral incisions usually made all the diseased synovial and other tissues, and to convert if necessary this, a minor operation, into the major one of excision of the knee-joint. The specimen shows how perfectly a healthy patella will unite when kept in accurate apposition. Unfortunately the first operation failed in its object, it being just possible that this method of operating is more applicable to children than to adults. This man, although doubtless delicate, and from his habits not a good subject for operation, presented on careful examination no disease of his lungs or kidneys contraindicating interference.

Mr. Richardson Cross, surgeon to the Bristol Royal Infirmary, has narrated before the British Medical Association (session 1883) a number of cases of partial operations on the knee and other joints, which have been most satisfactory.

LEEDS GENERAL INFIRMARY.

CASE OF UNUNITED FRACTURE OF THE PATELLA TREATED BY SUTURE AND MALGAIGNE'S HOOKS; FIRM UNION AND GOOD MOVEMENT; REMARKS.

(Under the care of Mr. WHEELHOUSE.)

FOR the report of the following case we are indebted to Mr. E. Ward, M.A. Cantab., house-surgeon.

William N——, aged twenty-eight, a strong, well-built, healthy man, of fine physique, was sent to the infirmary on July 5th, 1883, by a medical man from a large manufacturing town in the Midlands. Five months before admission he had fallen against the kerbstone whilst getting out of a cab, and had sustained a simple transverse fracture of the left patella. He had been treated in hospital by means of back splints, plaster-of-Paris, elastic knee-caps, &c., and the knee-joint had been once aspirated. For a few weeks before he came to Leeds he had tried to get about, but each attempt resulted in an acute painful swelling of the knee, and he was for all practical purposes totally disabled.

On admission, there was acute synovitis of the knee with considerable effusion, and accompanied by great tenderness, which rendered any accurate examination impossible. He was absolutely unable to walk. The limb was therefore put upon a back splint and evaporating lotions were applied. After a week, when the pain and swelling had somewhat subsided, it was made out that the fracture was almost transverse, and that the lower fragment was very small, comprising barely a quarter of the patella. The fragments were almost three inches apart, with a deep sulcus between, and there was apparently very little reparative material thrown out. As the knee was still somewhat tender and swollen, and there was a feeling of general thickening somewhat like that of the earlier stages of synovial degeneration, it was decided to wait for a time, but at the end of three weeks, as no further improvement had taken place, Mr. Wheelhouse elected to operate, and on July 26th, after the limb had been carefully purified, he proceeded to lay open the knee-joint by a transverse incision about four inches in length, midway between the fragments. On exposing the cavity it was seen that the whole of the synovial membrane except that on the posterior surface of the patella had been replaced by a thick cushion of soft, florid vascular granulations, especially abundant on the trochlear surface of the femur. There was no bond of union between the fragments, although each fractured surface was enveloped in a considerable mass of soft fibrous tissue. The surfaces were refreshed by removing a thin slice with the saw, leaving a gap three inches in width, and the fragments were drilled in two places in the usual manner with an ordinary gimlet. Stout silver wires were passed along the tracks, and an attempt made to draw the fragments together, but the sutures immediately began to tear their way through the smaller lower portion. They were therefore removed, and passed through the ligamentum patellæ into the cavity of the joint. Another attempt was then made, after a free division of the lateral aponeurosis on each side, but while the fragments were still more than an inch apart one wire broke and the other began to cut its way through both pieces. They were again removed, and the incision was converted into an H by longitudinal cuts. The whole of the anterior surface of the patellæ was then exposed by dissecting up the flaps thus marked out, and two sets of Malgaigne's hooks were inserted into the upper and lower aspects of the upper and lower fragments respectively, and they were brought by powerful traction into fair contact. The sutures were replaced, tightened, and twisted, but as soon as the grip of the hooks was slightly relaxed one broke short off at the twist, and the other again began to cut its way through. They were therefore released and left loose while the hooks were removed and reintroduced, being first passed through the skin. The fragments were again with extreme difficulty brought together, and the wire sutures were secured, being left of sufficient length for convenient removal. Drainage-tubes were inserted in the usual way at the most dependent point on each side, and the skin wound closed with silver and catgut sutures. It was then found that the hooks had been passed through the skin a little too far apart, and that when screwed up they caused an awkward looking tension of the skin beneath, but they were left without farther disturbance. It was hoped that they might be allowed to remain for a day or two until the extreme tension was somewhat lessened, and that the sutures might then bear the remaining strain. The wound and hooks were included in a dressing of salicylic silk and iodoform, and a long back splint was applied. In the evening the temperature was 99·2°, but the patient complained of a dull, aching pain in the extensors of the thigh, and some pain in the back. There was no pain in the knee. One-sixth of a grain of morphia was injected hypodermically.—27th: Morning temperature 98°; pain less, feels better. Evening temperature 100·4°; less pain, but rather restless. Morphia repeated.—28th: Morning temperature

100·1°; wound dressed. Skin looked rather red and tight beneath the hooks. Very slight sanio-serous oozing. Drainage-tubes removed. Evening temperature 100·4°; feels comfortable.—29th: Morning temperature 99·2°, evening 100·4; no pain.—30th: Morning temperature 98·8°, evening 100·2°; no pain. From this date to Aug. 4th the temperature remained normal, and he was perfectly comfortable, excepting a little restlessness at nights, which was relieved by small doses of morphia.

Aug. 4th: Wound dressed. Redness and swelling of skin quite disappeared. No discharge. Superficial sutures removed. Evening temperature 100°. After this date it was never found to be higher than 99°.—8th: Dressed; hooks causing no irritation.—16th: Dressed; slight discharge from a button of granulation at site of inner drainage-tube.—25th: Dressed; Malgaigne's hooks easily removed without disturbance of fragments. Thirtieth day.

Sept. 1st: Deep sutures removed, fragments apparently firmly united but movable on the femur.—18th: Splint removed; slight passive movement.—26th: Got up. After this date he was allowed to get up and walk about freely, gaining strength and confidence every day, but he was much troubled with pain and œdema of the foot, which did not quite subside for nearly a month.

Nov. 2nd: Sent to a convalescent hospital. Could walk well and with confidence. Could flex the knee nearly to a right angle. Movement increasing daily. Extension powerful and complete.

Remarks by Mr. WARD.—At the present time, when the discussion of the treatment of fracture of the patella is absorbing so much attention, it may be of interest to recapitulate some of the conclusions drawn from a series of five cases treated by suture in the Leeds General Infirmary, between August, 1881, and June, 1882. The case reported above also illustrates a successful method of combating the purely mechanical difficulty of approximating the widely separated fragments of old cases, a difficulty which is far from uncommon, and which, in one case mentioned by Mr. Turner in the paper read before the Clinical Society, led to the abandonment of the operation. In one of the earlier cases treated here, division of the quadriceps tendon was tried, but it caused embarrassing hæmorrhage, and did not contribute towards the approximation of the fragments in any appreciable degree. With regard to general considerations, the main question is, of course, that of ensuring an aseptic wound. The ordinary precautions about instruments, hands, spray, dressings, &c., are now almost matters of automatic routine; but there is one important condition about which I wish to speak particularly, for I believe it to be a more prolific source of the so-called "failure of the aseptic method" than is any other individual factor. It is the condition of the tissues, especially the skin of the part operated upon. Within a very recent period I have known of antiseptic (?) operations (not operations of urgency) being performed where almost up to the very moment of incision the skin had been an entire stranger to any form of germicide whatever, and in the practice of this hospital it has been conclusively demonstrated that the method described by Mr. Watson Cheyne is, at any rate amongst the lower classes of a large manufacturing town, in many cases insufficient, and always so in such regions as the axilla or about the toes, &c. Moreover, the application of 1 in 20 carbolic lotion to the skin for half an hour has in several cases produced such severe vesication as to necessitate the postponement of the operation. The plan adopted here in all operations except those of immediate urgency, is to rub the skin vigorously for a short time with spirit of turpentine, which appears to be the most effective solvent of the fatty and sebaceous accumulations about the hair-follicles and gland ducts. The part is then wrapped for twenty-four hours at least in lint soaked in a 2 per cent. solution of carbolic acid. This is renewed several times and the skin shampooed in the intervals so as to remove all the dead epithelium. In a series of more than 100 osteotomies for deformity performed during the last two years, the few cases of suppuration have been generally associated with the insufficiency of this precaution. In operations for injury, strangulated hernia, &c., dependence is placed almost entirely upon the turpentine as a solvent and antiseptic. It is a striking fact that the proportion of suppurations in primary amputations as compared with those for disease (except for gangrene or other antecedent putrefactive conditions) is about two to one. It is also worthy of remark that these suppurations appear as a rule to be conditioned by and limited to a micrococcus infection, and do not develop the putrescent features of open septic wounds. The vertical incision is the simplest and best in recent cases, but when greater holding power is required, it is much more convenient to make it transversely. The great advantages of Malgaigne's hooks in procuring and, under certain circumstances, maintaining apposition is seen in the case described above. In the first and second cases, in August and October, 1881, the wire twists were cut short, hammered down, and left *in situ*, and in both cases, when seen almost a year afterwards, the sutures had not caused any irritation whatever. In the old-standing cases one suture was found to be insufficient, and in the first and fourth cases three were used. In the three later cases the sutures were removed, and there does not appear to be any special advantage in leaving them *in situ*, for any force sufficient to refracture a firmly united patella would almost certainly either break the wires or tear them out. Of the three patients who were kept in view longest, the only one who could not bear to kneel was the one in whom the sutures had been left. Drainage was entirely dispensed with in two cases, for reasons which were discussed when the cases were published, and which still indicate a similar procedure in similar conditions. Salicylic silk was used in all the dressings, and in the appended case it was impregnated with iodoform powder by means of an ordinary dredger. Passive motion was only practised in one case for a few days; in all the others the natural movements of the joint were quite sufficient to restore the normal range of flexion.

ST. VINCENT'S HOSPITAL, DUBLIN.

SEVERE REFLEX VOMITING, WITH SOME REMARKS ON NUTRIENT ENEMATA.

(Under the care of Dr. F. J. B. QUINLAN.)

MARGARET D——, aged twenty-one, married, of no occupation, was admitted on Oct. 19th, at 10 A.M., suffering from great prostration, the result of uterine reflex vomiting, which had continued for six days. She was quite collapsed, her extremities cold, and her pulse very feeble. A blister was applied to the epigastrium, and four minims of dilute hydrocyanic acid, with ten of laurel water, in a dessertspoonful of iced water, were given immediately, and every three hours. To relieve the tormenting thirst small pieces of ice were allowed to dissolve in the mouth. At 3 P.M. I learned by telephone that although the vomiting returned occasionally, especially if the patient attempted to drink even ice-water, the prussic acid remained down, and the thirst was abated. Still the pulse was becoming weaker, and distinct signs of sinking were apparent. A nutrient enema was ordered, which was retained, and was repeated punctually at intervals of every three hours, except once during the night when the patient was asleep. The following morning she was better; the strength was much improved; and she was able to swallow ice-water in small quantities. The rectum was now becoming a little irritable, which was overcome by adding to each nutrient enema four minims of laudanum. The vomiting ceased, and she became gradually able to substitute nourishment in the ordinary way for the rectal alimentation.

The nutrient enemata employed in this case consisted of two ounces of very good beef-tea with one of milk. To these fluids mixed together and heated to 120° F. a teaspoonful of Benger's pancreatic fluid was added, and the whole was allowed to remain under a cosy for twenty minutes. A dessertspoonful of brandy was now poured into the enema, which was administered blood warm. In using these nutrient enemata, whether of beef-tea, milk, or eggs, it is not always remembered that the large intestine has no peptonising apparatus for rendering colloid substances dialysable. As a consequence they do not pass through the mucous membrane, and a feeling of distension is experienced, often ending in the expulsion of the remedy. A peptonised enema causes no feeling of distension, or at least one that soon passes away; and any patient who has tried both ways will at once tell the difference. Sometimes in prolonged enematisation the bowel becomes very irritable, and in this case the addition of a little opium (if the other symptoms do not contra-indicate it) is most valuable. It is hardly necessary to add that nutrient enemata should not as a rule exceed four ounces. It is better to repeat them often than to run the risk of expulsion attending the use of larger ones.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Amputation in Senile Gangrene.—Mediastinal Emphysema and Pneumothorax in connexion with Tracheotomy.

THE ordinary meeting of the above Society was held on Tuesday last, Dec. 11th; J. Marshall, F.R.S., President, in the chair. A paper by Mr. Hutchinson, advocating the treatment of cases of senile gangrene by high amputation, excited an interesting and valuable discussion, and there was therefore barely time to discuss as it merited, a short communication made by Dr. Champneys on mediastinal emphysema after tracheotomy.

Mr. JONATHAN HUTCHINSON contributed a paper on High Amputations for Senile Gangrene. The paper began by the statement that the author's chief object was to urge the safety and expediency of amputating in senile gangrene if the operation were done at a good distance from the disease. In the common form of gangrene of the toes and foot, the lower third of the thigh was the part suggested as the proper level of the amputation, and in rare cases in which the hand was affected the middle of the upper arm. After remarking on the fact that amputations had hitherto generally proved disappointing owing to return of the disease, the author urged that this was owing to their having usually been done too low down. The calcification of the arteries, upon which in the main the disease depended, was usually greatest near the periphery, and hence the difficulty as to supply of blood for the nutrition of the flaps. This source of danger was not met with if the amputation be done sufficiently high. In a series of cases in very old patients the author had not encountered the recurrence of gangrene excepting in one. In three the stump had healed well. In a fourth, in which the patient, although not old, was prematurely senile and the calcification of the arteries extreme, the recovery had also been excellent. In this instance the femoral artery was so rigid that it stuck out from the face of the stump like a small bone. One of the patients in whom the stump had healed without a drawback was seventy years old. In two of the cases, the other foot had been subsequently threatened with gangrene. As to the time to be selected, the author thought that as soon as the patient was so ill as to be confined to bed and the disease was well established, it was best to operate. Spontaneous cure was, he urged, very exceptional, and a great majority of such cases ended in death after a long period of much suffering. The thinner the patient the less was the risk of the amputation. In a few cases in which the thigh was exceptionally fat and the tissues flabby, it might be wise to hesitate as to recommending it. In all his cases Lister's precautions had been carefully used, and in two or three the patient had never experienced the slightest pain from the day of the operation.—The PRESIDENT was interested to find the views on such a subject undergoing change—no doubt as a result of the improvements in modern surgery. He thought Mr. Hutchinson's views would meet with approval, especially his remarks on the necessity of operating very high above the gangrenous part.—Mr. RIVINGTON corroborated Mr. Hutchinson's views. He had met with many cases of senile gangrene at the London Hospital, but he had never met with one which underwent spontaneous cure after the gangrene had involved a great part of the foot. He had amputated in two or three cases. The last time was a year ago, for a patient aged nearly seventy. The foot was gangrenous. He amputated at the lower third of the thigh antiseptically. A few days after the operation there was a little sloughing, but the stump healed perfectly.—Mr. HULKE had no experience of this method of dealing with senile gangrene. An analysis of Mr. Hutchinson's cases did not show the evidence in favour of the practice to be so cogent as might be wished. He thought that only two of his cases were really senile gangrene. He had no experience of preventive amputation for gangrene; for he had no such confidence in amputation in aged people. He had seen cases of spontaneous recovery after senile gangrene of the foot and lower third of the leg. His own experience was in favour of the conservative treatment of such cases, and before accepting the new doctrine he should require more evidence than Mr. Hutchinson had given.—Mr. BARWELL once amputated below the knee for senile gangrene, and some sloughing took place in the flaps, as had occurred in other cases mentioned before. He thought the arteries were likely to be calcified above the knee as well as just below, and that the superiority of the higher amputation depended upon the better circulation in the arterioles. He did not think that in all cases the amputation should be so high up as the lower third of the thigh; it was a mere matter of degree.—Mr. CROFT had no experience of a case of senile gangrene in which such a treatment could be employed. He had expected the paper to refer to senile gangrene only, but on the list were other cases. The merit of Mr. Hutchinson's treatment consisted in amputating above the local disease. The disease when fatal was so from blood poisoning, and to remove wholly the real source of infection was a sound principle. Another element in Mr. Hutchinson's success was operating under antiseptic precautions. The cases therefore showed the value of amputating high up in all cases of septic destruction of tissues necessitating amputation.—Mr. R. J. GODLEE referred to a case then under his care at University College Hospital. It was that of a man aged about fifty, who had gangrene of several toes involving about half the foot. He had no pulsation in any part of the limb. He was supposed to have suffered from syphilis. The gangrene showed no sign of stopping, and the man was becoming rapidly worse and suffering much pain. Amputation was performed at the knee, all the soft parts being preserved in the hope that the anastomosis about the knee might receive some blood-supply from branches of the internal iliac. The amputation was done antiseptically. No vessel required ligature at the time, but on the following night some hæmorrhage took place into the stump. No suppuration took place for several weeks, and then it was clear that some necrosis of the bone had occurred; two inches of this had to be removed, and this has had to be repeated at a later period. The man is now nearly well. He thought the bearing of antiseptics upon this question was important. Why sloughing often used to occur in such amputations was because the tissues could not withstand the irritation of the septic discharges.—Mr. CRIPPS referred to the general hopelessness of cases of senile gangrene. Such gangrene had more than a single cause, the defective blood-supply and the irritation and inflammation resulting from injury. He would advise amputation lower down than Mr. Hutchinson, nearer to the sphacelus, with strict antiseptic precautions. He referred to a case under Mr. Holden's care, in which that gentleman amputated antiseptically at the lower third of the leg for gangrene of the part, and the wound healed and the man left the hospital with a useful limb.—Mr. W. S. SAVORY said that Mr. Hutchinson had raised a grave question in surgery—grave in the disease under discussion—grave in the remedy suggested, for any amputation in the thigh in old people was dangerous. He asked whether these cases of senile gangrene were all of the same order; he thought not. The paper reminded him of Larrey's proposal in connexion with traumatic gangrene. Before his time these cases were left to die; Larrey stepped in and recommended early amputation high up. Then came Mr. Vincent, who showed that the cases were of two kinds and required different treatment; and so it was with senile gangrene. The causes were partly constitutional and partly local; when these reached a certain stage gangrene ensued; but in some the local causes were predominant, in others the constitutional were most efficient, and as regarded treatment the two classes could not stand in the same category. If the mischief depended chiefly upon the constitutional cause, amputation would not be successful; if upon local causes, it would. In typical senile gangrene, where the vessels were calcareous, a very trivial cause might start it; but in others a considerable injury might originate it; and the same thing might occur in younger people, when the tissues were rotten. Where there had been a considerable amount of injury, he thought amputation would be useful; but in the typical form of senile gangrene amputation, high or low, would be generally attended with disaster. In the paper the cases were mixed as regards the paramount consideration of their cause. But even accepting his cases, they were not sufficient to warrant the establishment of such a line of practice as that recommended by Mr. Hutchinson.—Mr. HUTCHINSON agreed in the main with Mr. Savory in his views. He quite felt that his cases were insufficient to quite establish the rule of practice he sketched. Senile gangrene was no doubt a vague term, but he used it to denote any case depending upon progressive degeneration of arteries. He was surprised to hear Mr.

BEST COPY AVAILAB

Savory speak of typical senile gangrene as dry. He had long ago abandoned that idea. In nine out of ten cases it was not dry even when spontaneous. Typical dry gangrene occurred in other cases, such as plugging of arteries. He was sorry not to have made it sufficiently clear that he only quoted his first case in evidence of the advantage of high over low amputation through healthy tissues. He held that all his other cases were typical cases of senile gangrene; even in the instance of the man above sixty, where the gangrene followed a trivial burn on the hand, it was typical. In the man aged only forty-eight the arteries were extremely calcareous; it was an example of premature senility. His experience was that amputation through the thinnest part of the thigh was less dangerous than through the upper part of the leg. He did not expect to find the vessels not diseased, but the less diseased the higher he went up the limb. But further, in the thigh there was only one main artery to secure, and in the leg the vessels were often difficult to seize, and there was more liability to secondary hæmorrhage. But it was a matter for subsequent experience to decide at what level the high amputation should be made. In two of his cases of amputation through the thigh the patients recovered and the stumps healed with absolute and entire primary union, and he had never had such a result in amputation at or below the knee. He had only that day found Mr. James's narrative of the experience of high amputation for senile gangrene at the Exeter Hospital. The list included five cases in very aged patients, and all recovered; all suffered from suppuration and several had some amount of sloughing. In two cases both lower limbs were successfully amputated for gangrene. Such facts were strong in favour of the line of practice he had advocated. He thought that the abolition of shock by anæsthetics, the bloodless method of operating, and the rapid primary healing of the amputation wounds, placed the question of such an operation in quite a different light from that in which it had previously been. In all cases there was a certain local etiological element, and he believed that in almost every instance where the case would not heal spontaneously the amputation would be a relief to the patient. But if the spontaneous separation of the sphacelus were probable, and would leave a more useful limb than that made by a surgeon's amputation, he would of course prefer to leave the patient to the slower process of natural amputation.

Dr. F. H. CHAMPNEYS supplied an addendum to his third communication on Artificial Respiration in Stillborn Children: Mediastinal Emphysema and Pneumothorax in connexion with Tracheotomy, in which the following statement from Dr. Angel Money was incorporated. Since the publication of the above paper there had been twenty-eight cases in which autopsies were made after tracheotomy. Of these fourteen were males and fourteen females. In all the cases the examination was made under water. In sixteen out of the twenty-eight (eight males and eight females) emphysema of the mediastinum was found. In two of these cases pneumothorax was also observed—not, however, without emphysema of the mediastinum. The amount of emphysema of the mediastinum was greatest when pneumothorax existed also. In many, if not all cases, artificial respiration had been performed. It will be seen that the occurrence of emphysema was noted in five cases, or 6 per cent., of those which ended fatally after tracheotomy in twenty-one years, before the publication of the paper above referred to, and in sixteen cases, or 57 per cent., in the two years following its publication. Pneumothorax was not noted in a single one of the eighty-two cases occurring in the twenty-one years previous to the paper, but has been noticed twice in twenty-eight cases occurring in the two years following its publication. These facts spoke for themselves.—Dr. J. KINGSTON FOWLER said that for the last two years he had noted carefully the condition of the mediastinum in cases of death from diphtheria occurring at the Middlesex Hospital. There had been twenty cases, ten males and ten females, the average age being four and a half years. In sixteen cases tracheotomy had been performed—the high operation in thirteen, the low in three. Emphysema of the mediastinum had been present in four of the former and two of the latter series; pneumothorax also in two of the former and one of the latter, in which case it was double. Of the tracheotomy cases in which emphysema occurred, artificial respiration had been performed in three only. The case which was of most interest in his communication was one in which no tracheotomy had been performed, but all the signs noted by Dr. Champneys had been present. There was in this case emphysema of the root of the neck on both sides, especially the left, and of the anterior and middle mediastina. There was also pneumothorax on the right side, the lung being one inch and three-quarters from the chest wall. Air extended upwards between the trachea and œsophagus as far as the cricoid cartilage. The upper lobe of the right lung was distended with air; the middle and lower lobes collapsed. There was interlobular emphysema of both lower lobes. This case showed that there was another possible explanation of the mode of entry of air into the mediastinum in death after laryngeal obstruction—viz, from rupture of the lung, escape of air beneath the pleura and into the mediastinum, subsequent rupture of the pleura, giving rise to pneumothorax. Dr. Champneys had no doubt given the correct explanation of the phenomena observed in his experiments, but it could not as yet be considered proved that in all cases of mediastinal emphysema following tracheotomy the air had entered by the wound. These cases had not been examined under water; but by carefully dissecting through the tissue of several intercostal spaces, it had first been ascertained whether the lung was in contact with the parietal pleura, and, this point having been decided, the mediastinum was examined before the sternum was removed.—Dr. DOUGLAS POWELL said that of seven cases of fatal diphtheria with tracheotomy two showed mediastinal emphysema; in one of them the tube was displaced from the trachea for some time after the operation. In the second case, a boy aged eleven, emphysema began very quickly, and the boy died asphyxiated in a few hours. In such cases there were all the conditions observed by Dr. Champneys in his experiments, and in living children the lungs were in a state of tension already. When mediastinal emphysema had once occurred, tracheotomy was not successful, as the air passed into the cellular tissue instead of into the air vesicles. He thought Dr. Champneys' experiments pointed strongly to two practical matters in the operation of tracheotomy—that it should be high up, and that the neck should not be stretched far back, and the trachea drawn out from the chest so as to render the opening of the fascia at the root of the neck probable.—Dr. CHAMPNEYS replied that in his paper he had only referred to emphysema after tracheotomy. He had not left to conjecture the route followed by the air, but had demonstrated it by the experiments detailed in his paper. Above all other things producing the inspiratory emphysema of the mediastinum was forcing the tube by the side of the trachea. The dangerous period of the operation was that between the division of the deep cervical fascia and the efficient introduction of the tracheotomy tube. Emphysema without tracheotomy was no doubt expiratory emphysema, alluded to but not further discussed in his paper. On this point he hoped to lay a paper before the Society in a few days.

MEDICAL SOCIETY OF LONDON.

Morphia Habitués.—Pulpy Degeneration of Synovial Membrane.—Foreign Body in Pharynx.

THE ordinary meeting of this Society took place on Monday, Dec. 10th, Dr. Hughlings Jackson, F.R.S., Vice-president, in the chair.

Dr. MUNRO exhibited, with Mr. HUTCHINSON, a portion of a chain, three inches and a quarter long, which had been swallowed by an infant, aged eighteen months, and passed per anum after twenty hours.—Mr. HENRY MORRIS outlined the case of a young man who had swallowed an aluminium pencil case, such as might have formed a pendant to a chain. This was ejected after five days, and was then found to have undergone changes in colour and substance.

Mr. ROYES BELL read a paper on the Surgical Treatment of Pulpy Degeneration of Synovial Membrane (see the "Mirror of Hospital Practice," p. 1041).—Mr. WM. ADAMS said that he should prefer to operate on adults rather than children. The most remarkable feature of this case was the perfect bony union.—Mr. A. PEARCE GOULD mentioned a case of a man, aged forty-seven, affected with fibroid thickening of the synovial membrane of the knee-joint, for which he had performed the operation of removal of a large quantity of the diseased membrane, because the man refused amputation. The patient died of exhaustion, persistently refusing

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amputation to save life.—Mr. ROYES BELL, in reply, repeated his convictions of the benefit of excision in children in such cases.

Dr. BENJAMIN WARD RICHARDSON read a paper on Morphia Habitués and their treatment, of which the following is an abstract. The author first described the usual circumstances which led to the habitual hypodermic injection of morphia, to which his communication more specially referred. He spoke of the quantity of morphia which could be tolerated for long intervals of time, and described the doses as varying from less than a grain to as much as fifteen grains per diem. Later on an account of the symptoms produced by the daily injection of three grains and a half, extending over a period of two years, was given from facts supplied to Dr. Richardson by the habitué himself. The symptoms were—(*a*) Torpidity in the action of the liver; (*b*) abscess forming at or near the site of puncture; (*c*) tendency to local induration, and (*d*) a free excretion from the bronchial surface; (*e*) difficulty, occasionally, in swallowing morsels of small substances, as if the object were arrested in its passage owing to its becoming enveloped in a layer of tenacious mucus; (*f*) a tendency, at times, to violent perspiration, more often present when the morphia has been almost entirely excreted, or when the system has been much debilitated; (*g*) various perversions of sensations; (*h*) occasional difficulty in articulation like that resulting from alcoholic excess; (*i*) impotency; (*j*) difficulty of breaking off the the habit owing to craving for the narcotic, and symptoms of debility when it was left off; (*k*) mental exaltation and depression, with tendency to exaggerate dangers; (*l*) excessive excitability of the imagination when reading—e.g., works of fiction; (*m*) lessened sensitiveness and receptivity with inclination to apathy, varied, it may be, with brief periods of mental exaltation. The more serious subjective and objective symptoms induced by deeper indulgence in this habit were next described. Increased appetite for the morphia; loss of will power; confirmed apathy apart from the ordinary toxic effects of opium; failure of all the mental faculties together with general failure of voluntary and involuntary muscular power were witnessed. Diminished vitality with bending of the body and the signs of premature old age were the physical symptoms. The dangers incident to the practice was the next topic dilated upon. In certain forms of fatal diseases the habit with all its drawbacks was thought to be sometimes permissible and useful. Existence might be made easier and life prolonged. This, however, was the exceptional part of the practice, and required to be carefully separated from the general. In conclusion, Dr. Richardson insisted upon the importance of the thorough breaking off the habit as the only natural and safe method of cure (*vide infra*).—Dr. GEORGE THIN had had considerable experience, and was strongly of opinion that the sudden breaking off was the only safe method of treatment. The gradual reduction of the dose could not be relied upon. The peculiar moral perversity of habitués was well known to Sir Robert Christison, and Dr. Thin considered that their words were not to be relied upon. He read an abstract from the *Friend of China*, showing that the discontinuance of the habit *in toto* was not followed by disastrous consequences. The resemblance between the effects of opium-eating, opium-smoking and morphia injection was illustrated from Dr. Thin's experience. He considered that opium-smoking was quite as injurious as the other forms of the opium habit.—Dr. MACLAGAN had seen nothing but good result from the abrupt termination of the habit. But no matter how treated they were apt to fall back from time to time. No reliance could be placed on their statements. In the convalescence from this state disagreeable cold profuse perspirations were frequently met with.—Dr. HERON spoke of a gentleman who told him that he had been in the habit of taking not more than three grains daily of solid opium for twenty years. In alternate months he took one grain and a half with a view to prevent the habit getting the mastery of him. Dr. Heron also referred to some serious symptoms which he had seen follow upon the hypodermic injection of half a grain of morphia in a case of gall-stones.—Dr. RICHARDSON was inclined to agree with Dr. Thin that the remote effects were somewhat similar, though he could not say the same of the immediate effects. The profession in America seemed to be indulging in morphia, &c., but he spoke more carefully of the profession in England, though it was possibly on the increase here. He quite believed what Dr. Heron had stated, and spoke of the susceptibility to opium which sufferers from gall-stones seemed to possess, a fact which was known to Home, who introduced the opium treatment of diabetes. When the morphia habit existed in a minor degree he thought the abrupt removal of the drug was the best treatment, but when the major degree of the habit had to be treated, he considered that a gradual reduction extending over a period of some days was the best. He said that habitués did not intentionally tell falsehoods, but they seemed to say anything quite regardless of truth or falsehood.

HARVEIAN SOCIETY OF LONDON.

Diabetes Insipidus.—Anæmia.

A MEETING of this Society was held on Nov. 1st, the President, Dr. E. Symes Thompson, in the chair.

Dr. SIDNEY PHILLIPS read the notes of a case of Diabetes Insipidus due to Syphilis. The patient, a man aged thirty-three, came to St. Mary's Hospital on Sept. 28th, 1883. He had for three weeks previously been passing an excessive amount of urine, the quantity gradually increasing till during the night before he came under observation he had passed ten quarts. The urine was faintly acid, colourless, of specific gravity 1001, free from albumen or sugar, and without phosphatic or other deposit. His thirst was very great, but appetite moderate. There was severe pain, increased at night, in the right fronto-parietal region, with localised tenderness. The right pupil was irregular from old iritic adhesions, and in the substance of the tongue was a gumma of the size of a marble. He had been losing flesh of late, but was fairly well nourished. His history showed that he had been an out-patient at the hospital ten years previously with a chancre and secondary eruption, and had since at various times suffered from the effects of syphilis. He was ordered to take ten grains of iodide of potassium thrice daily; a week afterwards he reported that his headache ceased after taking the medicine, and that the polyuria was gradually diminishing; this improvement had continued up the present date, when he was passing a little over three pints of urine in the twenty-four hours, and the gumma of the tongue had much diminished in size. Dr. Phillips remarked that in this case there was very distinct evidence that the patient was suffering from tertiary syphilis, and that he had a node in or upon the surface of the brain, situated apparently in the fronto-parietal region; that the increased flow of urine was also due to syphilis could hardly be doubted, but whether it was due to a lesion on the cortex of the brain was not so clear. In all the recorded cases which he could discover where a growth had been found as the cause of the polyuria, it had been situated at the base of the brain. Such a case was reported (*vide* THE LANCET, 1880) by Dr. Ralfe, where a gumma the size of a pigeon's egg was found post mortem in the floor of the third ventricle. Trousseau, however, in his "Clinical Lectures," records a case of polyuria following attacks of ordinary hemiplegia, and where the lesion was presumably elsewhere than at the base, and possibly in the present case it was due to a node on the surface of the brain, which softened and diminished in size under the influence of the iodide, as the gumma of the tongue was simultaneously observed to do.—Dr. BROADBENT had never seen a case of polyuria caused by syphilis; he was of opinion that in this case there was a gumma in the region of the fourth ventricle, and not at the vertex of the brain.—Dr. EWART, Dr. DAWSON, and Mr. LAMB also spoke, and Dr. PHILLIPS replied.

Dr. STEPHEN MACKENZIE then read a paper on Anæmia. The author commenced by defining anæmia as a diminution in the quantity of the blood, of its red corpuscles, or of its colouring matter. He then proceeded to speak of the numeration of the corpuscles, and estimation of the hæmoglobin, which ought to be borne in mind in all cases of anæmia, and allied conditions of gravity or complexity, on account of the valuable information gained for diagnosis and prognosis, and as a means of testing the effects of treatment. From 110 to 90 per cent. for males, and from 110 to 80 per cent. for females might be accepted as the limits of the number of red blood-corpuscles compatible with health, while the hæmoglobin richness varied between 110 and 90 per cent. in males, and 110 and 85 per cent. in females. It was thus seen that there was a range of about 20 per cent. in the number and colour of the red blood-discs in conditions that passed for health. The author then proceeded to state that anæmia might be: (1) Primary and essential, or idiopathic; or

(2) secondary and symptomatic. This division was important, as it was obvious that the causes, prospects, and treatment of the two divisions might be widely different, though the effects of each were closely approximated. There had been laid down as the diagnostic signs of idiopathic anæmia: (1) absence of organic disease, and of recognised and sufficient cause of anæmia; (2) absence of uterine and ovarian complications, amenorrhœa, menorrhagia, pregnancy, post-partum hæmorrhage, &c.; (3) severe and ingravescent anæmia; (4) irregular and occasional pyrexia; (5) retinal hæmorrhage; (6) diminution in the number of red blood-discs, and presence of small deeply coloured red corpuscles; and (7) maintenance of adipose tissue. He proceeded to show that heads 1, 2, and 3 required no discussion; they simply made it clear that we had to deal with a primary and progressive anæmia. 4. Irregular and occasional pyrexia. This, whilst not constant in idiopathic anæmia, was present in other forms of the disease; but as the anæmia was of a high grade in the cases usually called "idiopathic," so in these was the pyrexia, as a rule, more pronounced. 5. Retinal hæmorrhage was held by many as distinguishing idiopathic from other forms of anæmia. He believed retinal hæmorrhage was evidence only of the degree, and not of the kind of anæmia. 6. He showed that the presence of small deeply coloured corpuscles was not constant in, nor peculiar to, idiopathic anæmia, and that alteration in the shape of the discs was present in recoverable anæmia. 7. Conservation of fat, which, as Addison had pointed out, was usually seen in fatal anæmia, was not peculiar to it, and was equally or more frequently present in recoverable anæmia. He concluded that, little as we know of the causes and pathology of idiopathic anæmia, it was not wise to separate the fatal from the recoverable cases, as we knew nothing more of the former, and saw all grades of anæmia. The author showed a table giving the grades of anæmia, with the percentage of red corpuscles in each grade. Anæmia commenced at 80 per cent., was moderate at 65 per cent., grave at 50 per cent., very grave at 35 per cent., and fatal below 20 per cent. or thereabouts. In proportion as the blood richness was below 50 per cent., the tendency to hæmorrhages, pyrexia, and œdema became manifest.—Dr. C. THEODORE WILLIAMS said that we should know the bearing of the other constituents of the blood in this class of disease; in which cases, for instance, there was an increase of fibrin, and in which a decrease. Another point to which attention should be paid was the different size and form of the corpuscles in many diseases, such as phthisis and other pulmonary affections, in which globules of half the normal size were to be seen. He had also found, some years ago, granular masses about one-tenth the size of red corpuscles, and designated hæmatoblasts by foreign observers. These were seen in the blood of menstruating women, and in that of the frog. He had noticed them, too, in children recovering from measles in such large numbers that blocking of the capillaries by them seemed inevitable, and he further suggested that these might be the cause of venous thrombosis so often seen in acute diseases.—Dr. PYE SMITH doubted whether grave anæmia was to be considered as a separate disease, but thought it very convenient to give the name idiopathic anæmia to the collection of symptoms described by Addison.—Dr. BUZZARD traced a resemblance between these cases of idiopathic anæmia and cases of pernicious ague. In the Black Sea, during the Crimean War, he had seen many cases of ague of great virulence, accompanied by profound anæmia, and generally fatal. The symptoms were not intermitting, and seemed to be due more to impoverishment of the blood than to malarial influences.—Dr. BROADBENT thought the advantages of retaining the term idiopathic anæmia had been conclusively proved. He did not think that the number of corpuscles per cent. afforded a sufficient boundary line between pernicious and ordinary cases of anæmia. He had seen many of the severest cases recover, and kept in health by the administration of arsenic and phosphorus.—Dr. STEPHEN MACKENZIE replied, and the meeting then adjourned.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of the Society, held at 1, Adam-street, Adelphi, on Nov. 16th, Dr. Dudfield, president, in the chair, Brigade-Surgeon EDWARD NICHOLSON read a paper on the Water-Supply of Troops in India, of which the following is an abstract:—The native portion of our Indian army does not live in barracks, in Southern India at least. The Sepoys live in "lines," streets of huts, the conservancy of which is effective in preventing any extensive pollution of the soil, without interfering with the peculiar customs of Indians. Water is drawn by hand from wells in the lines; it generally shows the mineral traces of pollution of the soil, but thoroughly oxidised. Disease is very rarely traceable to it. The English troops live in barracks suited to the climate, and the sanitation of which is effected by means which are simple and in harmony with the circumstances. Our small army is set free for purely military duties by the employment of barrack native auxiliaries, scavengers, watermen, cooks, and sweepers. The dry-earth system is in general use, though imperfect in its details. Water is supplied from wells in or near barracks, rarely from tanks. Barrack wells are generally ten to twenty feet in diameter; pollution can scarcely ever occur from drains, but may arise from accidental dirt in the drawing of water by hand, or by imperfect mechanical means and also in its distribution and storage. The wells are rarely worked by pumps, which generally get out of order, and there being no competent workmen in cantonments, the various indigenous mechanical appliances are preferred. The water is distributed generally by the watermen attached to each company, and drinking water is always filtered in the barrack verandahs. The usual appliance was until lately the three-chatty filters—a series of three chatties (wide-mouthed globular pots of unglazed earthenware), set one over the other in a bamboo frame. The middle pot contains sand and charcoal, through which the water in the uppermost trickles (by holes in the bottom), and is received in the lowermost; into this the soldier dips his tin pot when he requires a drink. This system is very simple, and cools the water down nearly to dew point, but any purification is rarely effected, so much is the water exposed to dirt, and so imperfect and often dirty is the filtering medium. The three chatty-filter has lately been superseded by the Macnamara filter, a very imperfect form of Danchell's syphon filter, which gives unsatisfactory results. Mr. Nicholson simplified the three-chatty filter. He reduced the chatties to two, one closing the mouth of the other. In the bottom of the upper one is a nozzle, about one inch in bore, and two inches long, into which a piece of sponge is packed. This can be cleaned daily. The lower pot is flat-bottomed, and fitted with a metal stopcock, which can be shifted to a fresh pair of chatties when those in use cease to cool the water from the loss of porosity. This simple filter was highly approved by the soldiers and by the Commissariat Department, but failed to replace the official pattern. Elephantiasis is attributed to impure drinking water, and investigation of the subject is desirable. The evidence as regards the production of malarial fevers by drinking-water is very incomplete. Enteric fever is a main cause of fatal disease among our soldiers in India, but its extent among the Indian population is very uncertain, owing to the almost total absence of any Western medical attendance for it, or consequently of any trustworthy registration of causes of death. Hence it is very difficult to trace the cause of enteric fever in soldiers. We can only say that the disease has most probably been contracted out of barracks, and that the habits of the natives, where the soldier frequents, are such as to favour the propagation of enteric fever among them. The propagation of cholera through drinking water is generally accepted, and though it is difficult to trace the source of an epidemic in barracks, yet the fact of its being so frequently contracted on the line of march, and of the circumstances of a march being so favourable to its communication through polluted drinking water support the view strongly. Filtration of a kind suitable to barrack life is considered ineffective in preventing infection by any of the diseases attributable to drinking water; the boiling of water and its subsequent aeration, refrigeration, and storage, in a simple chatty filter was advocated.—In the discussion which followed the President, Surgeon-General Gordon, Dr. Tripe, Brigade-Surgeon Scriven, and Dr. Saunders took part, and Mr. Nicholson replied.

DURING the gale which swept over England on the evening of the 11th instant, a surgeon in a suburb of Manchester was setting the leg of a lady, fractured by the fall of a part of the house, when another portion of the building fell and broke the unfortunate gentleman's thigh.

Reviews and Notices of Books.

Diseases of the Ovaries. By LAWSON TAIT, F.R.C.S. Birmingham: Cornish Brothers.

THIS work is the fourth edition of the Hastings Prize Essay for 1873. It is, however, now no mere essay, but a valuable treatise by a practitioner of considerable experience and an operator of skill in the diseases which form the subject of the book.

The work is divided into six chapters, the first of which treats of the Anatomy and Physiology of the Ovary and Oviduct. In writing this chapter the author has drawn largely on the works of the late Mr. Balfour; but he seems to have forestalled the distinguished biologist in many of his discoveries, and to have subsequently confirmed him in others. Some of the statements made in this chapter, as well as in other chapters in the book, are of a somewhat extraordinary character—such as, "The mucous lining of the tube [Fallopian] is lined with ciliated epithelium, the movements of which are directed towards the uterus, and the function of which is certainly to prevent the passage of spermatozoa up the tube." Again: "Under ordinary circumstances, when the tube is healthy, its cavity is occupied by a small quantity of viscid mucus, and during menstruation this is replaced by blood of the usual dark fluid character." The first is a bold, not to say baseless statement, when we bear in mind that Prevost, Dumas, and Wagner found living spermatozoa in abundance in the Fallopian tubes, and that Bischoff found them not only in the tubes but in the ovaries in animals. The second appears not less bold when the rarity of hæmato-salpinx is remembered; and the author himself practically contradicts this statement later on, when he states, "The most common of the varieties of this disease is hydro-salpinx, and the rarest is hæmato-salpinx." Were it true that hæmorrhage into the tubes occurred every month, the above relation would be reversed. Moreover, it is by no means common to find in the tubes during menstruation anything but clear mucus, or perhaps mucus slightly stained with blood.

The second chapter treats of the Errors of Development of the Ovaries and Oviducts, Salpingitis, &c. The account given of the diseases of the tubes is much fuller than is usually met with in works on ovarian diseases or elsewhere. The author has devoted much attention to this subject, and has come to certain conclusions with respect to the physiology of the tubes which are not generally received. Whether the observations and inferences of the author given in this chapter be correct or not, there can be no question of the interesting as well as suggestive character of this part of the work. Here again we find statements which, by their improbability or by the want of evidence in support of them, it is not possible to accept but as suggestions. For instance: "As this disease [scarlet fever] is peculiarly incident to childhood I have a strong impression that a large number of the cases of incompletely developed sexual organs in women arise from the effects of this disease in childhood." It is surely the fact that country children are affected with scarlet fever just as well as town children, and it is equally a fact that troubles arising from imperfectly developed sexual organs are comparatively absent in country girls. 'Even without the occurrence of pregnancy marriage often establishes the health of women afflicted with arrest of ovarian development." This statement is another way of recommending marriage to girls suffering from ovarian troubles; but no evidence has yet been brought forward to justify such a recommendation, while it is well known that marriage in a very large proportion of such cases seriously intensifies the suffering. The galvanic stem is recommended for imperfectly developed ovaries, although there is no evidence of its efficacy in removing that condition, and in spite of the many instances in which it is known to have caused death. We are surprised to find such a statement as the following on page 66:—"All my patients, twenty-two in number, have recovered, and of those in which a sufficient time has elapsed since the operation I can say confidently that they are all completely cured." Why have the particulars not been stated, and a scientific value given to the sentence? In the pages treating of extra-uterine pregnancy, which are in many respects of considerable value, we come now and then upon unsatisfactory statements—e.g.: "In a case which I saw with the late Mr. Ross of Wakefield I diagnosed either extra-uterine gestation or a double uterus with pregnancy of one side, and it turned out to be the latter." The first thing that strikes us here is the absence of data for making the diagnosis; for both the conditions referred to are usually very difficult of recognition. Did the woman go to full term, and was the labour natural? And, if so, what steps were taken to prove the presence of a double uterus?

Oöphoritis, Peri-oöphoritis, Cirrhosis of the Ovary, and Abscess of the Ovary form the subjects of the third chapter. It is well known that gonorrhœa and the exanthematous fevers are occasional causes of acute ovaritis; but we think the author lays undue stress upon the part they play in the production of the disease. Chronic ovaritis is briefly and inadequately treated. This perhaps arises from the fact that the diseases of the Fallopian tubes are discussed at some length, and that the author ascribes to the tubes a place and an importance which they have not hitherto claimed.

The fourth and fifth chapters treat of Ovarian Tumours and the conditions which simulate them, and of Ovariotomy. In the former the pathology and diagnosis of ovarian tumours are ably discussed. At the same time the account given is far from being full and even adequate, for the views of some leading pathologists are disregarded. The author draws largely upon the writings of De Sinety and Malassez, while he practically disregards the works of Waldeyer, Rindfleisch, and Wilson Fox. A short account is given of the history of ovariotomy, and we are glad to find justice done to Dr. Charles Clay, who has not received during recent years the acknowledgment his labours deserve. Robert Houston, the Hunters, John Bell, McDowell, and others receive their due; but when the author discusses the merits of living ovariotomists it is not so easy to hold the balance evenly. The method of performing the operation, and the after-treatment adopted by the author, are fully given. The former is carried out without the aid of antiseptics, and a striking point in the latter is the administration of sulphate of magnesia as a purgative to allay vomiting. The author states, "The fact that I have been so successful in my own operations without drainage makes me think it probable that I have unconsciously substituted purgation for drainage." Should this idea prove accurate, it will greatly add to the simplicity of the after-treatment.

The last chapter treats of recent Extensions of Abdominal and Pelvic Surgery; the greater part of it consists of reprints from the Journals and Transactions of the Societies.

We would direct particular attention to this book as an able exposition of the subject of which it treats by one who is not only a skilful and successful operator, but who has also thought for himself. The work is highly suggestive in many ways, in some respects original, while it is written not only with ability but also with plausibility, so as to carry the reader with the author. It deserves careful, but at the same time critical, attention. It is a work to study, if perhaps it is not to be followed implicitly; for, like a frolicsome young kid, the author springs from one height to a higher, from premiss to conclusion, by the aid only of "I believe," "I am certain,"

"I am convinced," or even "I am under the impression," regardless of the fearful chasms over which he bounds. We have given several instances of this mode of progression, the careful reader will find many others, and may according to his bent follow the author along a scientifically adventurous path or choose one less beset with dangers and difficulties

Should another edition appear, it would add to the value of the work if the present meagre index were replaced by a full and copious one.

De l'Epilepsie et autres Maladies Convulsives Chroniques. Par W. R. GOWERS, M.D., F.R.C.P. Translated from the English by Dr. ALBERT CARRIER. Paris: G. Masson. 1883.

WE are pleased to welcome the appearance in a French dress of this valuable work. The exhaustive character and the physiological method of the original work are sufficient grounds for desiring that the volume should be within the reach of the French medical profession. When we consider that out of an incoördinate series of 1450 cases the author has succeeded in evolving a well nigh perfect picture of epilepsy and allied disorders, we cannot wonder at the high estimation in which the work is held both at home and abroad. It is not an easy matter to realise all at once the extensive nature of Dr. Gowers' labours. One thousand four hundred and fifty cases personally observed accurately recorded, industriously tabulated, variously combined and wonderfully coördinated—leaving out of consideration the literary merits of the volume,—such are a few of the chief phases of intelligent industry through which nearly fifteen hundred clinical records have been made to pass. As we said in our review of the English edition, the whole work is in the strictest sense original. The French edition is a simple translation, without any appreciable alterations. Only a few foot notes, duly signed, have been intercalated by Dr. Carrier. The get-up of the volume is really good, if we except the paltry covers which foreign books, as we see them, seem to delight in. So far as we are able to judge, the translator has at all points accurately caught the author's meaning, and turned it into excellent readable French.

OFFICIAL REPORT ON THE SIZING OF COTTON.

As far back as 1872 a report was submitted to Parliament by Dr. Buchanan on the influence of the heavy sizing of cotton goods on the health of operatives employed in weaving. The subject was, however, again brought before Parliament during the course of last session, and as a result Dr. J. H. Bridges and Mr. E. H. Osborn have issued a joint report on the subject to the Home Office. It would appear that since 1872 the proportion of size to warp has much increased, owing to a demand for heavily sized goods, but that pains have at the same time been taken to reduce to some extent the amount of size dust that is lost during the process of weaving, this being to some extent due to the use of chloride of magnesium, which both retains moisture and adds to weight. But it is not only the amount of dust in the weaving sheds that has been alleged to operate injuriously on the operatives; it is also the excessive moisture that is imparted to the atmosphere. The average amount of vapour found in the sheds by the Commissioners was 5·38 grains per cubic foot, whereas it was only 4·5 grains at the time of Dr. Buchanan's inquiry. So, also, the excess of moisture over that in the atmosphere outside is recorded as 2·38 grains, as opposed to 1·2 grains in 1872. Indeed, the moisture is such that an artificial climate of a tropical and relaxing character is induced, and hence one of the principal grievances of the workpeople is the dampness of clothing which is induced in consequence. In several instances steam jets were found to be discharging into the sheds, even when a mild rain and a south wind obtained outside. It is true that each weaver had some 1800 to 2400 cubic feet, but this is of comparatively little importance in view of the fact that there is practically no ventilation, and hence no change of the air breathed.

The Commissioners express the opinion that neither excessive dust nor steam is inseparable from the process of heavy sizing, processes being known to manufacturers by which both may be avoided. Unfortunately, however, these processes are regarded in the light of trade secrets. The great importance of providing adequate ventilation of the weaving sheds is pressed by the Commissioners, who allege that it is extremely doubtful whether the entire atmosphere of many sheds is changed even once a day. They suggest methods by which this may be carried out without any impairment of efficiency, and they state that in any case the object to be attained for the purposes of health is that the total mass of air in the weaving sheds shall be changed not less than once during each hour. If that object were realised, it is believed that complaints, whether from the size dust or from steam, will sink into insignificance.

The main object of the inquiry was, we believe, to ascertain what the influence of this process was upon health. The evidence which was procured on this head is, however, of but little value. It appears that questions were put to twenty-seven persons by the Commissioners, and this during the hours of employment in the sheds. The result was that seventeen did not make any complaint, and the remaining ten said they had suffered more or less from the damp, principally in the form of rheumatism, facial neuralgia, nausea, vertigo, and bronchitis, and the Commissioners were convinced that even if such ailments had not been actually brought about by the nature of the work, they had at least been aggravated in consequence of it. Nineteen medical practitioners also gave the result of their experience in the matter, thirteen giving evidence affirmative of injury to health, five denied any such influence, and one was neutral. The report then explains that the question whether the health of the operatives employed in a cotton weaving shed compares favourably or not with that of other operatives in a cotton factory could not be decisively answered without a statistical investigation of a more exhaustive kind than the time and opportunities at the disposal of the Commissioners enabled them to undertake, and they proceed to state that an examination of certain limited statistics went, so far as the circumstances of the investigation offered, to show that male weavers and other cotton operatives were in point of health much on a par. We certainly regret that mere want of time, if this really was the main cause, should have led to the practical abandonment of that which really constituted the most important portion of the inquiry.

The Commissioners in conclusion draw attention to the almost total absence in the weaving districts of any skilled attempt to ascertain with precision what are the real facts as to matters of such easy measurement as the temperature and the moisture of the sheds. It is very rare indeed even to find a thermometer in a weaving shed, and as to the hygrometer, simple though the instrument is, it appears to be absolutely unknown. This is a matter which is the reverse of creditable in an age when science is becoming so universally applied to all processes of manufacture, and it is to be hoped that if the report does nothing else it will at least lead to the procuring on the part of manufacturers of the simple appliances necessary to a proper knowledge of the facts, and also to some more complete study than has yet been made of the influence of size, dust, and moisture upon the health and lives of operatives engaged in the Lancashire weaving sheds.

THE MIDLAND COUNTIES HOME FOR INCURABLES. An effort is being made to remove this institution from its present confined position to a more suitable site just outside Leamington, and the managers have been afforded the opportunity of purchasing a property known as the Hydropathic Establishment, the amount required being £11,000; towards this a sum of £7500 has already been subscribed, but the managers do not feel justified in closing with the offer unless £10,000 can be secured, and an urgent appeal for help is being made. Persons in the middle-class of life who can pay a comparatively small sum are admitted to the advantages of the institution.

MR. J. WARDLEWORTH, L.R.C.P. Ed., L.F.P.S. Glas., has been elected Mayor of Bury, Lancashire.

THE LANCET.

LONDON: SATURDAY, DECEMBER 15, 1883.

WHETHER Lord SALISBURY intended it or not, his paper on the housing of the poor has altered the whole tenour of political controversy. For years past many thoughtful and serious men have been estranged from political life and interest because of the apparent indifference of party leaders to the condition and happiness of the people. The homes they lived in, the money spent in drink, the mortality of their families, the absence of light and cheerfulness in their houses, and the problem of keeping body and soul together seemed matters of profound unimportance to leading statesmen so long as office was secured, or a political rival was made to appear to a disadvantage. If the people became dissatisfied or agitated, a Reform Bill or a Ballot Bill was thrown down to them. If they asked for bread from the "men of light and leading" they received a stone. Lord SALISBURY'S paper, coinciding with the "Bitter Cry of the Outcast Poor of London," has altered this state of matters very much. It has brought to the front the condition of the people, and though there may be some exaggeration, some tendency in some quarters even to sensationalism, it has shown the inefficiency of all statesmanship that does not take into consideration the conditions in which the mass of the people live—conditions by which virtue and independence may be either fostered on the one hand, or made impossible on the other. This revelation to statesmen may be inconvenient. It may dwarf to insignificance many questions that excite the opposition and the interest of parties; but it will in the end elevate political life, and will give those who follow it higher ends and higher criteria of conduct. It will tend to abolish that constant scandal of political men of the highest order spending a large part of their life and powers in disparaging other men of the same order, but of the opposite party, and it will help to bring men of equal powers into a dignified and friendly consultation, after the manner of physicians, which shall have for its object the health, and virtue, and happiness of the people. If it is a revelation to statesmen to find that there are greater subjects in the world than Reform Bills and Ballot Bills, it is no discovery to medical men. Their view of human beings, of "all that human hearts endure," is close and confidential. For two generations back many of their number have been as much exercised in keeping the people healthy as in healing their diseases. Dr. CHADWICK, Dr. FARR, Mr. SIMON, Dr. GREENHOW, and others, have thrown terrible lights on the causes of disease and of vice, and the strength of them in the workshop and in the homes of the poor. But they have preached almost to deaf ears. Weak women toiling up three flights of stairs with a pail of water, to satisfy the wants of a household; whole families occupying a single room; whole bodies of men affected injuriously by their occupation, or from the want of precaution on their own part or on that of their employers; the enormous waste of the wages of the working classes in drink; have, till very lately, scarcely ruffled the conscience of political men, even when brought prominently under their notice. It is to be hoped that we have seen the end of this indifference. If not, we may have a yet ruder awakening from the dream that a nation exists only for its upper classes to live in luxury, while its lower ones die in misery. It is not a little significant that vital and sanitary considerations now figure the most largely in all discussions. It is to the credit of the President of the Local Government Board that he is taking great trouble to acquaint himself personally with the actual state of things, and it is perhaps still more so that he takes with him in his investigations Dr. BALLARD, Dr. THORNE, and others, whose experience and ingenuity in searching out sanitary misery are so large. Sir CHARLES DILKE is a less acute man than we take him to be if he does not see how inadequately his department has grappled with questions of public health; and indeed how impossible it is, with the existing relations between medical officers and sanitary authorities and boards of guardians, to get fearless and effective work done. We do not intend in these reflections to deny that great political issues are involved; it is our conviction that they are. Rather we venture to suggest that the issues so involved are very large, and such as to include all classes who have comforts and means to spare. The wisdom of statesmanship is wanted to limit the operation of the selfish principle in all classes—to avert that condition of society

> "Where wealth accumulates and men decay."

In the words of Sir ROBERT RAWLINSON, "*There must be the means of health and comfort, with a chance of virtue in every British home, before men, women, and children can be Christian.*" Happy the nation that can promote such ends by peaceful means, and by the wisdom and the religion of all classes!

PROFESSOR TUTTLE of Ohio, in a memoir published in the "Studies from the Biological Laboratory in the Johns Hopkins University," points out that the presence of cilia in the urinary tubules of various cold-blooded vertebrates was known long ago. BOWMAN, for example, spoke of them as lining the tubules of the kidney in the frog near the capsule; whilst KÖLLIKER described them as lining their whole extent in an embryo lizard; and MÜLLER found a similar lining in the tubules of the kidney of a skate. As regards warm-blooded vertebrates, our present knowledge is less extensive, apparently on account of the speedy arrest of movement after separation from the body; whilst the best microscopes made a few years ago were inadequate for the detection and resolution of such delicate and thickly set cilia as are really present when in a state of rest. GERLACH, however, saw what he believed to be ciliary action in the kidney of the common fowl; and KLEIN saw cilia in the hardened and stained kidney of the mouse. The kidneys examined by Professor TUTTLE were obtained from a series of autopsies made at the Small-pox Hospital under favourable circumstances as regards their fresh condition. They were carefully hardened in alcohol, and were in an exceptionally fine state of preservation. They were stained with Bismarck brown and mounted in glycerine, though some were examined unstained or stained with other reagents, and some were mounted in balsam. It was whilst studying the structure of the nuclei with a Zeiss one-twelfth

oil-immersion objective that he observed fine closely set cilia projecting freely into the lumen of the tubule, which is considerably enlarged in the small-pox kidney. Although they were seen in numerous places in the section under examination, his first impression was that each spot must be taken from a part in close structural proximity to the classical neck of the capsule of its respective tubule; but after he had spent several days in the examination of the same specimen, he found a region (depicted in a plate attached to the memoir) which is plainly the place where the lower part of the convoluted tubule or the "spiral portion" of Schachowa passes into the descending limb of Henle's loop. The subsequent examination of a large number of sections from the whole series of kidneys convinced him that the convoluted tubule is very extensively, if not generally, ciliated. Professor TUTTLE remarks that the question of the relation of the cilia to the rod-like bodies of Heidenhain naturally presented itself; and, as the alcohol-hardened human kidneys did not reveal these structures, he determined to make a comparison of the two kidneys of some mammal, one hardened with alcohol, and the other with some chromic compound. A kitten was accordingly killed, and one kidney was divided and placed in strong alcohol, and the other treated in a similar way with Müller's fluid. The cilia were readily found in the more active portions of the kidney hardened in alcohol, where the lumen of the tubule was sufficiently large; the small size or absence of the lumen in the more distally situated parts rendered it impossible to discover them in that position. The kidney hardened in Müller's fluid showed the presence of the rod-like bodies of Heidenhain distinctly, though not conspicuously; and also, though not so clearly as in the case of that which had been hardened in alcohol, the cilia, situated in some instances upon cells in which the former structure could be detected, and in others upon those in which it was not discoverable. Professor TUTTLE is not prepared to offer any definite conclusions as to the relations between the two. On the whole, he is of opinion that cilia will eventually be demonstrated to be present in the kidneys of mammals generally; and he thinks, in regard to their use, that they play an important part in the propulsion of the urine towards the pelvis of the kidney.

OUR attention has more than once been directed to the advisability of teaching physiology in elementary schools, and as we write we have before us a paper lately read at the College of Preceptors, advocating the practice, and also a set of examination papers recently put to candidates for the position of instructors of the young. A more complete disproof than the latter of the alleged usefulness and simplicity of the ways and means of imparting knowledge on an inexact science could not be conceived. The following is one of eight questions propounded in so-called elementary physiology:—"Describe the characters, position, and attachments of the ossicula auditus or small bones of the ear, and explain their use in the sense of hearing. Is hearing possible in their absence?—if so, how?"

Now we venture to assert that if this is a fair specimen of what a child of tender age is likely to be tortured with, the sooner all physiology primers are got rid of the better for the juvenile portion of the community. And yet it seems to this absurd end are we drifting—attempting with the hottest pace to instil into the youthful mind matters for the ignorance of which a large percentage of medical students are being annually rejected at the examining medical boards. It has been urged with some measure of plausibility, and even justice, that everyone ought to know something of the air we breathe, of the water we drink, and of the food we eat. The acquisition is in itself highly desirable; but, whilst agreeing with the preamble of a Bill, exception may be taken to the application and working of its clauses. In the few years allotted to the poor schoolboy for the completion of his education, it seems to us that the first great duty is to impart such instruction as will enable him to understand the common transactions or exigencies of his after-life: by reading, to ascertain what is going on about him; by writing, to communicate to others his relationship to men and things; and by arithmetic, to be able to indicate the comparative values of his necessities and obligations. Of what use is it to inculcate in a costermonger's son the properties of ozone when it is known that in all probability the greater part of his life will be spent in regions where that desirable agent of health is all but unknown? An imperfect and scanty scientific education is at best but a poor substitute for the trust and confidence that the ignorant are generally ready to place in their superiors. We hold that the average brain of children under ten or twelve years of age is not so constituted as to receive and digest facts and theories which frequently serve as stumbling stones to persons of ripe experience. If we could with certainty and advantage draw from the diversified field of nature such knowledge as ministers best to human life and convey it to the intelligence of the expanding mind, a real benefit would be conferred on the recipient; but where this is not feasible it is far better to refrain from the attempt than to lead into a tangled brushwood of mental confusion. Physiology is at all times difficult to learn, and still more difficult to teach. It is not a simple science, but an admixture of many sciences. It implies a knowledge of anatomy, chemistry, and physics, and so when one starts to analyse an apparently simple problem, a number of subsidiary factors have first to be explained and defined. For this reason the road to finality is difficult to follow, and without finality all knowledge is liable to mislead. As a branch of higher education for advanced pupils, a study of physiology is well suited to improve the reasoning powers, for it helps to bring together and correlate simpler subjects that art for convenience has set apart, but between which nature knows no division. It cannot be necessary, however, that the principles of digestion should previously be grasped in order that a child may understand that milk is a proper article of diet, nor that the laws regulating the diffusion and displacement of gases must be learned before the conclusion is arrived at that travelling on the underground railway is deleterious to health.

WHEN puerperal fever came to be regarded as the result of the absorption of septic matter from the genital canal, attention became immediately directed to the value and importance of local treatment in the puerperal state, more especially antiseptic treatment. Indeed, if the source of the disease be in the vagina, it followed as a necessary con-

sequence that the attack upon it should be made mainly from that part. This kind of treatment was, however, not confined to cases in which fever had already set in, but was adopted also as a preventive means in cases in which from their nature and character fever might be expected: such cases are those in which instruments have been employed to complete delivery; cases in which the hand had been introduced into the uterus for turning, removal of an adherent placenta, or other object; and cases in which the ovum had perished and undergone decomposition before its expulsion from the uterus. The results which have followed the employment of local means have amply justified the expectations of those who first directed their attention to the use of antiseptics in obstetric practice. The method which has hitherto found most favour is the injection of an antiseptic solution into the vagina, and in certain cases into the uterus. In a large number of cases, probably the great majority, injections into the vagina doubtless prove sufficient, and it is only when the cavity of the uterus has become foul and infected that their application to the interior of that organ becomes a necessity. Frequently, however, and perhaps in too many instances, the moment the lochial discharge has become offensive, and the temperature raised, it is assumed that the whole of the genital tract has become septic. But this is not necessarily the case, and in many instances decomposition has taken place in the vagina only, for if the products of decomposition be removed promptly from the vagina, by means of a vaginal injection of an antiseptic fluid, the uterus remains healthy. This fact is one of no little importance in practice; for cleansing and disinfection of the vagina by such means are free from danger, while injections into the cavity of the uterus are associated with and have been followed by grave symptoms, and have indeed in several instances proved immediately fatal. Moreover, the inconvenience arising from frequent uterine injections, both to the patient and the practitioner, is great, and in many instances their effectual employment is impossible. Any means, therefore, which promises to prove effectual in preventing decomposition in the cavity of the uterus and vagina without demanding frequent application or renewal must be a welcome addition to the resources of the obstetric practitioner. This means may perhaps be found in iodoform. In the last number of the *Archiv für Gynækologie* is a paper by EHRENDORFER on the results of its employment in Professor SPAETH'S wards in Vienna. Iodoform was employed as a preventive of septic infection in cases such as we have already mentioned, and as a means of cure in cases in which decomposition had taken place and the system had been infected. The method employed was the following. The uterus, after the expulsion of the placenta, was washed out with a solution of carbolic acid (1 per cent.), and then a bougie containing five to ten grammes of iodoform was pushed into the uterine cavity beyond the inner orifice, and allowed to remain there. No vaginal injections were used afterwards, and only in seven cases was a second bougie introduced. This method was employed in twenty-seven cases; of these three died, and two were transferred to other parts of the hospital. There were but two cases of natural labour amongst the number; the rest were cases in which operative interference of some kind had been necessary, or cases of abortion with retained placenta. The puerperal period appears to have run a very favourable course; in most of the cases the patients were discharged on or before the tenth day after delivery. These cases are insufficient to show the value of iodoform in midwifery practice; this can only be done by a much larger series, and more especially by the result obtained from its employment, not in special cases, but in all cases requiring local treatment, and by the effects on the patients generally observed in lying-in hospitals in which iodoform is used.

Annotations.

"Ne quid nimis."

SIR WILLIAM BOWMAN, BART., AND SIR JOSEPH LISTER, BART.

IT is with much satisfaction that we congratulate these two distinguished surgeons upon being presented with Baronetcies, and we also congratulate the whole profession on the fact that two so worthy of the honour should have been selected for it. Mr. Bowman quite early made for himself a scientific reputation by histological work undertaken in conjunction with the late Dr. Todd, at a time when the microscope was only just beginning to be employed for this purpose. Of his success as an ophthalmic surgeon it is needless to speak, as Mr. Bowman has for years been at the head of that department of practice. This is not the time to measure the value of Mr. Lister's work. But it is a matter of common notoriety that no surgeon has so affected the whole practice of surgery as has Mr. Lister by his teaching in reference to asepticity. Before, however, entering on what may be described as his great work, Mr. Lister was honourably known for his valuable physiological and pathological investigations connected with the coagulation of the blood and the minute processes of inflammation. The selection for titular distinction of the surgeon most identified with the scientific progress of surgery shows a just appreciation of the spirit of its modern development, that will be gladly welcomed by all who regard it as a scientific art.

PROFESSOR OWEN, F.R.S.

THE announcement that Professor Owen has resigned his appointment of Superintendent of the Natural History Department of the British Museum will be received with regret, particularly as the step has been taken owing to the state of his health. He has well earned the rest from active duties, and it must be a source of satisfaction to him that he has been enabled to supervise the transference of the noble collection in his charge to the building which forms so excellent an addition to the museums of London. Prof. Owen has passed a long life in the pursuit of science, and as to public service how wide an interval separates us now from the time of his first tenure of office as the curator of the Hunterian Museum! The time is, we trust, far distant when the historian will pass his career in review, but it will be recorded of him that he pursued with unabated energy the study of the subject in which he was a master at an age when he might well be excused from such undertakings, leaving them to younger hands. He carries with him in his retirement the good wishes and sympathy of all who admire energy and singleness of purpose, and who recognise what he has effected in the domain of science.

TENEMENT HOSPITALS.

UNDER the above heading, Mr. Vacher, medical officer of health for Birkenhead, recently read a paper at Manchester, and having regard to the fact that it is of the utmost importance that persons occupying a somewhat superior social position should be attracted to hospitals for infectious diseases, some such plan of hospital construction as he advocates is certainly becoming more and more necessary. Persons in houses of business and whose wares are particularly liable to spread infection cannot often be induced to enter general wards; mothers in a good position of life will not part with their children, but will readily pay for a separate room where reasonable privacy can be combined with the advantages of isolation and treatment in hospital; and these persons, whom it is often essential to isolate in the interests of public health, could never be removed under the compulsory clause of the Public Health Act. All this is fully recognised by Mr. Vacher, and the principle he advocates deserves every attention. But as regards some of the details of his scheme, which he frankly admits may need revision, we think that the plan put forward is by no means the one best calculated to secure the end he has in view. He would arrange his tenements for hospital purposes much on the plan of an ordinary house; four, either for patients or nurses, on each floor of each block; and he would under ordinary circumstances make his block five storeys high, with ten separate double-roomed tenements to each staircase. Now such a plan we think both unwise and wasteful. If a single case of one infectious disease were admitted into one of the tenements, no other disease could properly be admitted into that block, and since solitary attacks of certain fevers do occur, the remaining tenements in the same block could not be used, especially in a building where it is intended not so much to treat patients as to isolate them. The plan adopted at Folkestone, and which is described in the official report of the Local Government Board, is, to our thinking, much to be preferred. In that case a series of rooms, all on the ground floor, and opening independently into the open air under a corridor, were specially provided so as to meet the case of several different diseases occurring amongst persons of the better class, and it would be easy, in the case of a large town, to increase the accommodation by having a second storey, to be reached by a staircase which should be approached from without, and in which the rooms should open under a roofed balcony. The most recent instance in which accommodation of this sort has been provided is at the London Fever Hospital, where the need for separate isolation-rooms, and rooms for the superior classes, has led to the erection of a block of small wards, which we regard as being in several respects a considerable advance on the hospital at Folkestone.

NERVE LESIONS IN PEMPHIGUS.

THE occurrence of definite structural changes in nerves in cases of cutaneous disease is becoming more widely known, and next to herpes there are few affections which are more suggestive of a neurosal origin than pemphigus. The latest contribution to the subject is to be found in the current number of Virchow's *Archiv*, where Dr. Meyer of Strasburg details a case of rapidly spreading dermatitis in a man sixty-five years old, the subject of cataract, but who had previous to the attack of skin disease been robust and healthy. The disease commenced as a simple papular eczema; it then assumed vesicular characters, and then took on the type of eczema rubrum; resisting all treatment, and spreading over the greater part of the trunk, it finally became "pemphigoid," numerous large bullæ appearing. The patient died seven weeks from the first appearance of the affection, diarrhœa being a marked concomitant towards the close. In this case there was no cachexia, no lack of nutrition, no inherited disease, and no renal affection to explain the malignant character of the skin disease; nor did an examination of the blood yield any micro-organisms, as have been found in some similar cases. The pathological examination revealed widespread inflammation of the skin, with denudation of epidermis, and in some places complete destruction of papillæ by the inflammatory cell growth. Some of the smaller arteries were nearly occluded by obliterative endarteritis, whilst many of the cutaneous nerves in various parts of the body showed extreme parenchymatous degeneration—viz., nuclear proliferation in the medullary sheath and fragmentation of the myelin. The motor nerves, sympathetic and spinal ganglia, and the roots of the spinal nerves showed no change; but there was manifest sclerosis in the spinal cord, limited to the vicinity of the posterior fissure in the cervical and dorsal regions, to scattered points in the posterior columns of the upper cervical, and in the lateral columns of the dorsal and lumbar regions. In these parts the interstitial tissue was increased, and the bloodvessels were much thickened. In spite of this change, obviously chronic, no symptoms of cord disease had been present in the case. The writer refers to similar cases, particularly one mentioned by Schwimmer, in a younger subject, where a general pemphigus with diarrhœa caused death in five months. No spinal symptoms were present; but Babes found a moderate amount of sclerosis of Goll's column, with slight myelitic changes in the grey matter. Peripheral neuritis has also been described in pemphigus by Lobert and Jarisch. Dr. Meyer, without affirming it as positively proved, suggests that the vascular obliteration seen both in the spinal cord and skin may have so impaired nutrition as to lead to sclerosis in the former and to render the latter more prone to disease evoked by the condition of the nerve-centre.

WATER DRINKING.

IT is somewhat surprising that in a country in which rain falls almost every day in large or small measure the use of pure water as a drink is not better understood than it is. Even now that the sway of temperance is well established, and continues to extend, we should be surprised to learn that a majority of Englishmen do not habitually discard the use of the natural beverage for one or other in which it is compounded with foreign ingredients. Yet its very purity from all but a salutary trace of mineral matter is what renders it capable of exactly satisfying, and neither more nor less than satisfying, the needs of thirsty tissue, and of assisting by its mere diluent and solvent action, without stimulation or other affection of function, the digestion and excretion of food. No other qualifications are necessary. Given digestible, solid food, and fair, that is normal, digestive power, water alone is all-sufficient as liquid. During the feebleness consequent on disease or overwork everything is changed. There is blood, though impoverished in quality, to receive and convey nutritive material, and there are tissues to be fed, but the *vis a tergo*, the driving power of the heart, resides in a languid muscle, and the alimentary canal, itself but poorly irrigated from that centre of supply, receives what food is taken only to prove its incapacity to utilise it. Nature is flagging, and a stimulant alone will make ends meet in the circle of tissue-building processes. As a general rule, however, abstinence holds the first rank, both in theory and practice. We do not assert that the man who regularly, and in strict moderation, partakes of a light stimulant—claret, for instance—may not, especially if he is equally regular in regard to out-door exercise, live comfortably to the full term of human life; but what we say is that the more simply the man fares, the more he employs such adventitious measures for actual physical necessity, the more he will

gain in health, in life, in working power, and in aptitude to benefit by stimulation when strength is failing from disease or from decay. But if water be the drink, how shall it be drunk? The means must have regard to the end required of them. To moisten food and prepare it for digestion it is hardly necessary to say that it should be taken with a meal; a couple of tumblerfuls at dinner is not an excessive quantity for most persons. For thirst-quenching properties nothing can surpass this simplest of drinks, and all which approach it in efficacy owe their power almost entirely to it. As to temperature, there is no real ground for supposing that one should not drink a sufficiency of cold water when the body is heated by exertion. The inhabitants of hot climates have no such objection. Some tropical wells are dug so deep that the water within them, even in hot seasons, is as cool as that of a European spring. In fevers, too, the use of ice in quantities sufficient to allay thirst is a part of rational and legitimate treatment. The shock which has to be avoided in all such states is not that which cools the mucous membrane, but that of sharp chill applied to the surface of the body. Some persons, however, find it convenient and beneficial to imbibe a certain amount of warm water daily, preferably at bedtime. They find that they thus obtain a bland diluent and laxative, without even the momentary reaction which follows the introduction of a colder fluid, and softened by abstraction of its calcareous matter in the previous process of boiling. This method, which is an accommodation to jaded stomachs, has its value for such, though it is not great even for them; but it affords no noticeable advantage for those of greater tone. The use of water as an aid to excretion deserves some remark. In certain cases of renal disease it has been found to assist elimination of waste by flushing without in any way irritating the kidneys. Everyone is probably aware of its similar action on the contents of the bowel when taken on the old-fashioned, but common-sense, plan of drinking a glass of water regularly morning and evening, without any solid food. Whatever may be true of harmless luxuries, enough has been said to show that health, happiness, and work find stimulus enough in the unsophisticated well of nature.

AN EXPERIENCE OF RECENTLY INTRODUCED HYPNOTICS.

IN an article (*Deutsche Med. Wock.*, Dec. 5th, p. 716) upon sleeplessness and hypnotics, Dr. Eickholt of Grafenburg, after considering the properties of opium, chloral, and hyoscyamin, refers to the two new remedies (oxidation products of alcohol) lately introduced—viz., paraldehyde and acetal; and he does not speak very favourably of them. Paraldehyde, introduced by Morselli, has a very powerful odour and burning taste—properties which increase the difficulty of its administration. According to Morselli, a dose of two or three grammes produces diminished voluntary power and peripheral sensibility, and lowers the frequency of the pulse, which remains regular and strong. But its hypnotic effects are transient, and Eickholt thinks it only applicable to conditions of simple melancholia, as in the state of exhaustion after long-lasting mania, or in the states of excitation occurring in dementia paralytica and in alcoholism. But its nauseous properties are a bar to its use, and the odour may be detected in the expired air twenty-four hours afterwards. Moreover, it causes dryness of the throat and thirst, and in many patients even congestion of the head and paralysis of the peripheral vessels. It is not to be recommended, he says, in private practice. Acetal (diethylacetal) introduced by v. Mering is even less desirable. Its hypnotic action is very uncertain, and its taste very burning and disagreeable. The hypnotic dose is eight to ten grammes—an amount sufficient to derange digestion, or, if not very freely diluted, even to corrode the stomach. Eickholt only saw it given to drunkards, and remarks that an equally good effect with less risk could be obtained by a bottle of beer or glass of cognac. He contrasts with these uncertain and even dangerous means the administration of cannabinum tannicum, a glycoside obtained from Indian hemp. It is given in doses of 0·1 to 0·5 gramme, and is especially useful in neurasthenic insomnia and in mild melancholia without delusions, but is contraindicated in conditions of excitation and severe melancholia. It does not derange the digestion or circulatory functions; and only a few persons complained of headache, tinnitus, &c., these being as a rule cases in which the cannabin had been substituted for opium.

COUGHS.

IT is sometimes forgotten that *coughs*—properly so-called and in their integrity—are convulsive, expiratory efforts intended to eject from the air-cells or passages of the lungs, or from the windpipe or larynx, either secretions or exudations, or occasionally foreign substances, which impede the act of respiration. Unfortunately there is seldom any constant relation between the frequency and force of a cough and the physical need for it. This is because, the act being, of course, performed by virtue of a special excitation of the nervous system, the degree of excitability of the nerves concerned in the production of the muscular contractions producing the cough determines its force and frequency, instead of their being governed, as they ought to be, solely by the exigencies of expulsion. Moreover, owing to the sympathetic connexion of nerves energising different groups of muscles and in relation with different centres, cough may be produced by excitations which are not local to the breathing organs. Therefore we find that *cough*, which ought to be a very simple process or function of a remedial, or, at least, physically helpful kind, is, in fact, itself a cause of disturbance and disease by reason of its excessive and disorderly character. Very grave mistakes are made in practice by treating cough as a pulmonary affection and in itself morbid. It is in a very large proportion extra-pulmonary in its cause, and it is only morbid in itself when there is no disease or disturbance in the lung which can create a need for expulsive efforts. Cough is always a nervously induced phenomenon, and as such it ought to be treated with the utmost carefulness, so as to ascertain its cause, its *raison d'être*, and the proportional relation which subsists between need and effort where need really exists. Without clear views on these various aspects of the question of cough in each particular case, it cannot be intelligently treated.

COFFEE AND TEA.

PERHAPS the most brilliant address which has yet been delivered at the Parkes Museum since the evening lectures have been inaugurated was that given by Dr. G. V. Poore on December 6th. Sir Henry Thompson occupied the chair, and amongst the audience were to be seen Dr. Russell Reynolds, Mr. Berkeley Hill, Professor Corfield, and other distinguished medical men. The subject chosen by the lecturer was "Coffee and Tea." After stating his belief that stimulants, both alcoholic and alkaloidal, had their uses, and that we ought to be very sure of our ground before we attempt to override appetite by dogma—as the Mahommedans had done—Dr. Poore proceeded to contrast "Coffee with Tea." The cup of coffee, provided it were genuine, contained more alkaloidal stimulant than the cup of tea, and owing to the absence of tannin the action of coffee was more rapid than that of tea. The specific gravity of a cup of tea was about 1003, that of strong coffee 1009, and of café-au-lait, sweetened, 1035. Tea was more of a pure beverage than coffee, and hence it was possible to use it as a mere luxury, for it required scarcely any digestive effort, and did

not "cloy" the palate. The danger of excessive tea-drinking lay mainly in the large amount of astringent matter. This was a most potent cause of dyspepsia amongst women of the sempstress class, who frequently consumed tea which had been boiled. When the system stood in need of a stimulant there was nothing equal to a cup of strong coffee; and if it were desired to wean the drunkard from his spirits a real stimulant must be supplied, and not the sickly, bitter, unwholesome stuff which was called "coffee" in this country. In order to make good coffee the berry must be fresh roasted and ground. There was no difficulty whatever in roasting coffee, and this ought to be part of the daily routine of every well-regulated household. It was important to use enough coffee; one and a half to two ounces of coffee to a pint of water made a first-rate beverage. Elaborate coffee machines for grinding were by no means necessary. If the coffee required for breakfast were put into a common earthenware jug overnight and cold water poured upon it, it might be heated to the boiling point in the morning by being allowed to stand in a saucepan of water over the fire. Violent ebullition was thus avoided, and the aroma was preserved. Chicory and other allied bodies are in no way substitutes for coffee, for they possess no stimulant properties. Out of ninety samples of ground coffee purchased in London shops only five were found to be genuine. This awful adulteration had been pointed out by THE LANCET Special Analytical Commission thirteen years ago. Coffee "mixtures" made an infusion of high specific gravity, and tended to derange the stomach. A well-sustained discussion followed, in which heads of well-known City firms took part. The meeting concluded with votes of thanks to the lecturer and to Sir Henry Thompson.

COLLECTIVE INVESTIGATION IN GERMANY.

WE have before referred to the fact that the Berlin Verein für innere Medicin has instituted an inquiry into phthisis, being stimulated thereto by the work now being carried on by the Collective Investigation Committee of the British Medical Association. At the meeting of the Verein, on the 19th ult., Dr. Guttmann presented a report from the Committee which had been appointed to initiate the work. (*Deutsche Med. Wochenschrift*, Nov. 28th.) The report states that an inquiry into phthisis was suggested by the important questions raised about its etiology, pathology, and treatment by the discoveries and experiments of Koch. It goes on to refer to the result arrived at by the English Committee on a more limited scale, when 130 cases of supposed contagion were collected out of a total of 1028, with the fact that the transmission in these cases was for the most part limited to individuals brought into intimate contact with one another or living under the same insanitary surroundings. It also refers to a like inquiry, the results of which were reported by Prof. Bockendahl to the Medical Association of Schleswig-Holstein in 1881, when numerous cases of acquired phthisis were collected. Another remarkable contribution to the subject cited in this report is that of Schlockow showing the extreme rarity of phthisis amongst the inhabitants of the sandy shores of the Baltic, as compared with the far greater prevalence on the western and north-western coasts. The inquiry now to be undertaken will, it is hoped, throw some light upon such questions as the following:—Is tuberculosis communicable by simple cohabitation? Is the great prevalence of tuberculosis referable to heredity? Can the disease be transmitted by the consumption of tuberculous (*perlsüchtig*) flesh and milk; or, put in another way, how does the infective germ enter the organism? Is there a congenital infection or a congenital disposition? What evidence is there of the latency of the germ in the organism? Why is it that the tubercle parasite in man has such a preference for localisation in the apex of the lung? Cards and memoranda have been prepared, and centres of inquiry established in various towns in Germany. The report then enters into detail upon the organisation, and gives examples of the "cards" as filled up with the required details, separate forms being used for the questions of heredity and contagion and that of the curability of phthisis (only those cases being required on this head in which two years had elapsed since the commencement of the disease). Mention is made of the gratifying manner in which the proposal has been received on all sides, and especially of the co-operation promised by the British Medical Association. It is proposed to collect the reports next February.

AERATED AND MINERAL WATERS.

A LATE meeting at the Society of Arts, over which Dr. Richardson presided, was signalised by a remarkable paper, read by Mr. Warren, on aerated and mineral waters. Mr. Warren, himself a practical worker, placed before the members not only all the modern machinery now in use, but gave an exhaustive account of the different improvements which have been introduced for the purpose of securing uniformity, purity, and pleasantness. The facts brought forward indicated that the dangers once existing of introducing chemical impurities, organic and inorganic, into the waters are now all but removed, that the variety of the waters as drinks has largely increased, and that the sale of these waters has also increased to an extent which taxes the resources of manufacturers often to an extreme degree. The production of mineral waters in this country does not, however, seem to be at all on the same level, and a suggestion by the chairman that an effort should be made to found a large commercial laboratory in which all the reliable and acknowledged medicinal waters of the world could be produced, so as to be at the ready command of the profession of medicine, was received with general favour. There are many remedies which could, no doubt, be administered in a pleasant and dietetic form if the mineral water manufacturers could make them at reasonable cost and of perfectly trustworthy composition. Hitherto the extreme costliness of aerated and mineral waters, and the exorbitant profits of retailers, have been direct obstacles to the popularity of the best waters, an imposition on the public which the meeting was not slow to recognise.

A CRY OF HUMANITY.

A CORRESPONDENT writes from Paris:—"The treatment of the Nihilists in the fortress of Peter Paul at St. Petersburg calls for a protest in the name of humanity. If a culprit deserve death and the law of the country sanction capital punishment, then let the extreme penalty be inflicted, but with the utmost decency and promptitude possible. Should the authorities, however, think fit to commute such sentences or to sanction lesser penalties, such pretended mercy should be something better than a mere pretext to shield from public opprobrium the gradual torturing to death of helpless prisoners. Certainly medical men should have no share in such inhuman practices. The letter written in blood received from one of the noisome cells situated below water-mark in the prison of Peter Paul, and summarised by *The Times* of last Friday, has also been communicated to me, and I would call attention to some details not yet published in England. The food, which should be the same as that given to common criminals—but the amount is not specified in the regulations that apply to the political prisoners—is never enough. No tea is allowed; a little plain hot water is served for the prisoners to drink both morning and evening. But, either through defects in the water pipes, or from other causes, this water is always dirty and sometimes fetid. There is a large proportion of sand in the prison bread, the gruel is

generally mouldy, and on Wednesdays and Fridays, instead of cabbage-soup for dinner, they have pea-soup flavoured with the coarsest oil. On Sundays a few shreds of meat are occasionally discerned in the soup. The diet and foul atmosphere soon produce diarrhœa and dysentery, followed by anæmia and scurvy. The elder physician, who has passed his eightieth year, never ventures into a cell; while his junior is so careful not to lay himself open to the suspicion of sympathising with the prisoners, that he visits them surrounded by gendarmes and gaolers, and does not dare to feel their pulses. He has, however, had the courage to reply to their complaints: 'Against your ailments we have no remedies'—an answer which, now that it has been made public, will probably cost him his post, if not his liberty. A lady suckling her child, Madame Jakmova, is stated to be left in an underground cell to fight night and day with the rats that seek to devour her infant. Till the Government has sufficient humanity to allow the medical officers to alter the diet and general regimen of their patients, it is mere hypocrisy to call in their services. The medical profession should resent this insult to their science. Their mission is to help to heal the sick, and not to aid a Government anxious to rid itself of obnoxious political adversaries."

PATHOLOGY AND ALMSHOUSES AT DEMERARA.

IF the report in the *Colonist* of an inquest held at Georgetown on Oct. 25th last be correct, we gather that medical testimony is not as exact and explicit in the colonies as one might wish. Owing to the unstable condition of the rails, an old blind Portuguese woman fell from an almshouse gallery a distance of ten feet. Death occurred about six hours afterwards. At the post-mortem examination there was found "serous effusion in the ventricles of the brain, and a clot in the right ventricle of the heart." The doctor stated that in his opinion "the cause of death was *embolism*, of which the indirect cause might have been a fall." We presume that by *embolism* was meant *thrombosis*, but the mere post-mortem presence of a clot in the right side of the heart scarcely warrants the conclusion that it was the cause of death. The serous effusion in the brain was probably the consequence of senile atrophy of the latter. We trust the report before us does not faithfully represent the extent of the knowledge of pathology prevailing in the colonies, nor the average strength of gallery rails through which the blind and infirm may accidentally fall. In the absence of more precise evidence, we suspect the cause of death was shock.

"PHYSIQUE IN POLITICS."

THE *Pall Mall Gazette* had recently an article on this topic, with somewhat too personal allusion, perhaps, to the shortsightedness of one prominent member of the Liberal party and the blindness of another. Had it not been for his shortsightedness, thinks our contemporary, Mr. Goschen might have been "Mr. Speaker" of the House of Commons. The defect in range of vision cannot, we are informed, be corrected by art. This may, or may not, be the fact. We have no means of judging. The question is obviously one which lies between Mr. Goschen and his professional advisers. We are quite prepared to admit that Mr. Goschen would, if practicable, make an excellent Speaker. Our immediate concern is not, however, with Mr. Goschen and his shortsightedness, but with the general question of physical fitness for political life. It cannot be questioned that physique plays an important part in the game of politics. A statesman must needs be strong in "body" as well as in "mind," to use an old-fashioned form of expression. The very long hours of attendance in the House of Commons, the amount of energy required to sustain attention, and the exceptional force demanded to produce good intellectual work when the brain is toiling at high speed and tension, are heavy taxes to impose on the vitality of any organism. Looking to the personal history of men who have served long as well as prominently in political life in England, who have not only made their mark but maintained their position in the front rank of active statesmanship, it must be evident that physical development by manly sports in early life, and physical fitness secured by perseverance in some form of muscular activity at and past the meridian of life, are fully as much necessary conditions of success as intellectual ability and mental power. Those who have not been in vigorous possession of physical health have succumbed, or they have proved uncertain and impulsive rather than persistently powerful as statesmen and administrators. There is no grander spectacle to the student of physiological psychology than that of England's Prime Minister felling trees. The idea embodied in this recourse to energetic physical labour, not so much as a relief from, as an adjunct to, mental labour, is one of the highest significance, and it teaches a lesson of rare value for all who have the wit to learn.

BACTERIA AND MILK TYPHOID.

A REPORT has just been issued by Dr. Saunders as to a prevalence of enteric fever which has occurred at Hemel-Hempstead, and which in the opinion of some of the inhabitants has been brought about by milk pollution. Dr. Saunders expresses a contrary opinion; he shows that only four out of a total of 136 houses supplied by this milk were affected; he explains that cases of enteric fever have for some time past been recurring in the town, and he adds that three of ten cases forming the special outbreak, besides three more who have since sickened, certainly used none of the milk under suspicion. The disease, in short, has evidently, according to his view, been brought about by ordinary sanitary defects. In the course of his report Dr. Saunders very properly warns people against being too ready to credit milk with more than its due, and it is evident that he shares with many others the opinion that in a number of cases in which milk pollution has been asserted to have produced disease, the proof has been by no means clear. But we doubt whether it is wise to have made this the ground for ridiculing the views of some of the inhabitants of the town in question. Some of them may only be "wiseacres," and it may be true that the specific germ of enteric fever is not likely to be discovered by "the *savants* of Hemel-Hempstead"; but, after all, it appears to us that at one stage of the epidemic they had some grounds for their fears, and the ordinary public can hardly be blamed because they feared that certain "bacteria" discovered in the milk had something to do with the outbreak.

THE WATER COMPANIES AND THE DUST-YARDS.

THE correspondence between the Board of Works for the Wandsworth District and the Southwark and Vauxhall Water Company respecting the dust-sifting yards is not very encouraging in its tone. We denounced in our Special Commission Report on the Dustyards of London the danger that might result from the proximity of the water-filtering beds and two dustyards where many hundred tons of household refuse were allowed to accumulate for months. We explained how particles of dust could easily be carried over by the wind and mixed with the vast accumulation of drinking-water that lies exposed for so many hours close to York-road Station. The District Board seems anxious to act in the matter, but insists that, in any proceedings

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to be taken against the dustyards, the Water Company must co-operate. To this the company reply somewhat ambiguously that the water they supply is of such general excellence and purity that "they had no reason to consider it to be affected by the existence of the dustyard in question, though, as a matter of sentiment, they would view its removal with considerable satisfaction." As there are no inhabitants in the neighbourhood who can prove the nuisance, the district board might lose the case unless the Water Company came forward as the injured party; and Colonel Bolton, in his report, certainly states that it appears to be most desirable that the Company and the Board should work together in this matter so as to secure the immediate removal of the dust. But how can the Company hope to win the case if in this same and official report they qualify the grievance as only a "matter of sentiment"?

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

IMPORTANT alterations have lately taken place in the nursing arrangements of this hospital. By the generosity of Mr. J. E. Briscoe, a member of the weekly board, a sum of £1000 has lately been placed at the disposal of the executive for the purpose of carrying out certain necessary structural alterations for the comfort, convenience, and health of the nurses. Hitherto the night nurses and pupil night nurses have slept in dormitories at the top of the hospital, and as the assistant-nurses and day pupil nurses have had their bedrooms almost in juxtaposition, often the night nurses have been much disturbed. To remedy this evil two houses conveniently situated, and in direct proximity to the hospital, have been purchased, and in every way made convenient for residential purposes. Great care and attention have been given to make the "Briscoe Home" suitable and comfortable as a habitation for the night nurses. The Home is under the supervision of the night superintendent, who assists the lady superintendent in the management of the nurses. All the domestic arrangements of the hospital are managed by a housekeeper. Twelve pupil nurses are annually trained, and they receive instruction not only in the wards but by lectures, which are delivered weekly for six out of the twelve months.

THE REGULATION OF ATTENUATION.

CORROBORATIVE evidence of the truth of the essential bacterial origin of some diseases is not wanting in the following considerations:—Certain regions of the animal body are less receptive of the virus of malignant pustule—that is to say, inoculation in these regions is successful with difficulty, and the local effect is by no means severe. Naturally there are degrees of receptivity, or reaction, as we may call it. It was with a view to ascertain the conditions which determine these differences of certain parts of the body that MM. Arloing, Cornevin, and Thomas have conducted renewed investigations. Inoculations with the virus of charbon performed in the coccygeal region of oxen and sheep have shown that the disturbances, either locally or at a distance, are very slight as compared with the results of inoculation performed in the neck and thereabouts. A similar observation has been made by M. Willems with the poison of pleuro-pneumonia contagiosa. These facts are usually explained by referring to the density of the connective tissue of the tail. The experiments of MM. Arloing, Cornevin, and Thomas tend to prove that to this cause the lower temperature of the coccygeal region must be added. These observers have been able, by warming or cooling the tails of the animals named, to increase or diminish respectively the amount of local and general disturbance produced by the inoculation. The results also show that "vaccination" against charbon may be brought about by inoculating the more powerful virus, not in the warm and moist tissues, as is usually done, but into a denser and colder portion of the organism. The authors have concluded that temperate seasons are the best for practising preventive inoculations; that "vaccination" should be abstained from during summer, and that if employed in the winter a successful result should be aided by keeping the animals for the first few days in a warm atmosphere.

THE OPIUM HABIT.

WE print elsewhere an abstract of a paper by Dr. B. W. Richardson on "Morphia Habitués and their Treatment," read at the Medical Society of London. An interesting and prolonged discussion followed the reading of the paper, and turned upon three chief points, the first being whether the sudden removal of the drug was the best method of treatment. This was agreed to by Drs. Thin and Maclagan, and in a modified form by Dr. Richardson. The second question related to the capacity of the habitués for telling falsehoods. All admitted that their statements could not be trusted, but Dr. Richardson went a little way into metaphysics. We were able to follow him, and think it possible that these habitués tell lies without any intention of so doing. But it may be asked why they do not correct them when the error is demonstrated. This lands us into fresh difficulties. The last feature was the repetition of the proposition by Dr. Thin that opium-smoking produces in the long run all the injurious effects which we have been accustomed to associate with that vicious habit. This statement is valuable as, amongst the latest on the subject, our readers will remember that Dr. Ayres, of Hong-Kong, has boldly challenged this conclusion (*vide* THE LANCET, p. 557, current volume).

SANITARY REFORM AT ST. HELENS.

THE result of Mr. Spear's report on the sanitary condition of St. Helens, to which we drew attention some time since, has already been to a certain extent satisfactory. A committee, after inspecting the town and visiting other large centres of population, have arrived at the conclusion that the midden-privy system, as at present carried out, is a great evil, and after discussing several remedies, they advocate the adoption of the pail system. This recommendation has been endorsed by the Town Council, and we may hence look forward to the removal, from the midst of this populous place, of many huge accumulations of excrement and refuse which have been tolerated by the system of excrement disposal hitherto prevailing there. Improvements connected with the sewers, the paving of streets and courts, and other matters have also been decided on.

STORAGE OF CARBONIC ACID.

IT is well known that carbonic acid gas when submitted to a pressure of thirty-six atmospheres at a temperature of 0° C. passes into the liquid state, but until recently this knowledge has not been turned to practical account. A few months ago it was asserted that liquefied carbonic acid was being advantageously used in the manufacture of aerated beverages. On December 3rd the apparatus contrived by Dr. Raydt of Hanover, for facilitating the industrial application of Faraday's discovery, was explained at a meeting of the London Section of the Society of Chemical Industry. A wrought iron cylinder fitted exactly with a brass screw valve is the material part of the apparatus, which can withstand the necessary internal pressure. The brewing industry in Germany has already availed itself of the invention.

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TUBERCLE WITHOUT BACILLI.

THE subject of the bacillus of tubercle may still be regarded as in the ascendant. Not to magnify the incidents in the progress of our knowledge, we may yet take cognisance of some new phases in the question which we owe to the industry of MM. Malassez and Vignal. There seems to be no doubt that tubercular lesions exist which possess very few or even no tubercular bacilli. Also it cannot be denied that the shortcoming lesions are tubercular. Inoculations made on animals with some of the tubercles which were wanting in bacilli nevertheless led to the development of lesions in which plenty of micro-organisms could be detected. But this was not invariably the case, for, instead of bacilli, zoogloea-like masses of micrococci and other forms might be found. The authors interpret the facts as meaning that the bacilli have anterior stages, in one of which they cannot be recognised at all, and in the other only under the form of aggregations of micrococci.

THE LONDON FEVER HOSPITAL.

THE first instalment of a new block of wards which have been specially designed and erected at the London Fever Hospital for the reception of private patients and for the isolation of special cases will be opened to-day (December 15th). The wards have been erected on the hospital site in the Liverpool-road, Islington, and they embody the most modern improvements found necessary in the construction of isolation wards. All the rooms open separately into the outer air under a covered verandah, the walls consist of specially designed and moulded glazed coloured bricks, and the comfort of a private room is in each ward combined with all the advantages of a hospital. Medical practitioners or others interested in hospital construction will be shown over the wards between 1 and 5 P.M.

THE PNEUMONIA MICROCOCCUS.

LAST week's issue of *Le Progrès Médical* (Dec. 8th) contains the first part of an article upon the pneumonia micrococcus, by E. Bricon, in which the history of the discovery of micro-organisms in this disease is traced, as given in the researches of Billroth, Klebs, Ebroth, Koch, Friedländer, Leyden, Günker, and others. The second part will be illustrated by figures. We may also take this opportunity of mentioning that a detailed account of his recent researches and experiments is contributed by Dr. Friedländer to the *Fortschritte der Medicin*, for Nov. 15th, a new and enterprising journal which commenced with the current year.

INOCULATION OF RABIES FROM A CHILD TO ANIMALS.

AN alleged case of rabies in a child aged seven years having resulted in death, M. Pasteur was asked to investigate the case. Inoculations performed beneath the dura mater after trephining gave rise to the characteristic signs of rabies in the four animals experimented upon. A piece of the medulla oblongata of the infant was transferred to two dogs. On rabbits, inoculations from the upper and lower parts of the spinal cord of the infant were performed. The diagnosis of rabies in the child was thereby supposed to have been confirmed.

THE CHOLERA GERM.

DR. W. G. BALFOUR, of Bombay, who has devoted much pains to investigate the causes of cholera, and who recently pointed out that the consumption of certain kinds of fish at particular periods of the year seemed to play a part in the production of the disease, has now announced the discovery in the blood of one of these fish—the Banela or Bombay ducks—of bacterial organisms resembling those which Dr. Koch found in the intestines of cholera patients in Egypt. He intends to submit his specimens to Dr. Koch on his arrival in Bombay. In passing, we may observe that our friends in Bombay seem to have misunderstood a remark we made *à propos* of Dr. Koch's researches in Egypt (THE LANCET, October 20th). We cannot pretend to be ignorant of the valuable work that is and has been done in combating cholera by observers in India; but what we especially regret is that England, unlike Germany, has no Government institution comparable to that over which Dr. Koch presides, and by means of which he is now pursuing his labours in the East.

PROFESSOR HUXLEY in distributing the prizes in connexion with the Finsbury Technical College and the South London School of Technical Art, on the 10th inst., said that as far as he knew there never had been and never was likely to be any great cause of social discontent except hunger of some kind or other. There was the physical hunger arising from the impossibility of satisfying the fair needs of the body, and the intellectual hunger, which arose from a feeling in the minds of capable and energetic men that they were prevented by the accidents of life or the organisation of society from taking the place for which they were fitted. He spoke strongly in favour of the training and discipline which were given by a system of technical education.

THE lectures to be delivered during the year 1884 at the Royal College of Physicians have been announced. The subject of the Gulstonian Lectures, which will be delivered by Dr. Clifford Allbutt on March 7th, 12th, and 14th, is "Chapters on Visceral Neuroses"; the Croonian Lectures will be delivered by Dr. Hughlings Jackson on March 19th, 21st, and 26th, the subject being the "Evolution and Dissolution of the Nervous System"; and Dr. James Andrew will, on March 28th, April 2nd and 4th, deliver the Lumleian Lectures, taking for his subject the "Etiology of Phthisis."

A MAN and his wife have been summoned in the Aberdeen Police Court for allowing two children to go to a shop whilst suffering from scarlet fever. They pleaded guilty and alleged that they were ignorant of the law on the subject. The magistrate, under the circumstances, only imposed a fine of 10*s.* 6*d.*, but expressed the hope that the public would take warning, since a much more severe punishment would be inflicted in the next case brought under his notice.

AMONG the gentlemen recently admitted, after examination, to the Fellowship of the Royal College of Surgeons of England, was Dr. W. B. Platt of Baltimore, U.S. He is the first native of the United States who has obtained this diploma. Subsequent to his course of study in the Harvard Medical School, Boston, he studied at Vienna, Berlin, Halle, Wurzburg, Heidelberg, and London.

THE question of the regeneration of divided nerves in man after suture has been the subject of fresh discussion at recent meetings of the Société de Chirurgie (*L'Union Médicale*, Dec. 4th). Mr. Pick has recorded a case of suture of the radial nerve six months after its complete division, with the result of functional restoration after a period of twelve months from the operation.

DR. DEHENNE writes in *L'Union Médicale* on the surgical treatment of interstitial keratitis. He recommends the performance of an iridectomy. Iridectomy, he avows, cures the disease in some days, and consequently confers immense benefit on the patient.

M. CHARCOT was most splendidly entertained at a banquet given in his honour on December 4th last, the occasion served to mark his election as a member of the Academy of Sciences. MM. Charcot, Bouchard, and Joffroy made speeches which were vociferously applauded. A letter of congratulation from Paul Bert, the politician and physiologist, was read by M. Liouville.

ON December 4th M. Germain Sée read a communication to the Académie de Médecine on the Diagnostic Importance of Bacilli in the Sputa. Briefly it may be said that the French professor is a firm believer in the bacillus. At all events, he regards its presence in the sputa as unequivocal evidence of the tubercular nature of the disease.

WHAT M. Bouchardat terms *organites* are, according to M. Béchamp, minute cells which may develop into microzymes. Both observers agree that the bacilli originate within the organism; but there seems to be a little hair-splitting in their views as to the precise mode of development (*vide* THE LANCET, p. 465, current volume).

AT the Medical Society of London on Monday next Sir Andrew Clark, Bart., will read a paper on "Catheter Fever." We understand that Sir Henry Thompson has consented to open the subsequent discussion, in which Sir Joseph Fayrer and Mr. Berkeley Hill will take part.

THE distribution of prizes of the Académie de Médecine for the year 1882 will take place on December 18th. The reports for the present year not having been completed, the prizes will not be awarded till some time later.

THOSE who are interested in the subject of pulmonary syphilis will find a discursive paper in the current numbers of the *France Médicale* by M. Ronzi. Stress is laid on the absence of bacilli in the sputa of such cases.

THE prevalence of measles and other infectious diseases has induced the authorities of Barnsley to order the closure of the whole of the public elementary schools of the town.

THE distinguished dermatologist, M. Vidal, has been elected a member in the section of Therapeutics of the Academy of Medicine, Paris.

M. RENDU is a candidate for the chair of Diseases of Children, left vacant by the death of M. Parrot.

CHOLERA is said to have broken out at Siout and the neighbouring villages.

SANITATION AT RAMSGATE.—A member of the Ramsgate Sanitary Committee was on the 3rd inst. fined £5 for allowing a house, of which he was the owner, to be so insanitary as to be injurious to health. The Bench expressed their indignation that such a state of things should have been allowed to exist for so long a time, especially as it was known that two deaths had occurred on the premises. If more than twenty-one days are allowed to pass before the required repairs are effected, a fine of ten shillings per day will be imposed. A witness stated that in 1881 he had refrained from asking permission to summon defendant because he was a member of the Sanitary Committee.

A NEW Children's Hospital in connexion with the Dundee Infirmary has been opened.

HOSPITAL ADMINISTRATION.

No. XIII.

THE OUT-PATIENT DEPARTMENT.

THERE is no part of a hospital so difficult to administer wisely and well as the out-patient department. Yet the system of giving out-patient relief at hospitals is of very recent date, the commencement of this branch of hospital treatment being within the recollection of some of the consulting staff of St. Bartholomew's Hospital. The present generation has therefore not inherited, but developed and enlarged, the out-patient department, and being responsible for this we must also be held responsible for the existing abuses which are now so patent as to necessitate a remedy being found and applied. In 1870 Sir Wm. Fergusson's committee,[1] after a long and careful investigation, recommended the establishment of provident dispensaries as "a remedy for the evils inseparable from the system of gratuitous medical relief administered at the out-patient department of hospitals and free dispensaries." Owing to the representative character of this committee, its recommendations carried great weight, and attempts were made in London, Manchester, Birmingham, and elsewhere to adopt the provident dispensary system, and so remedy, if possible, the evils pointed out. It is not too much to say that all these attempts have failed to touch the abuses so justly complained of, and it cannot be doubted that more and more people who ought to join a provident dispensary, or to employ a private medical practitioner, have found their way each year into the hospital out-patient departments. Several independent attempts have been made to ascertain the cause of this complete failure of Sir Wm. Fergusson's remedy, and the unanimous answer has been, so long as the hospital committees remain neutral and refuse to vigorously administer the out-patient departments on some definite plan which provides for the exclusion of the unworthy and designing, so long will out-patient abuse increase and multiply, to the effectual extinction of the provident dispensaries, which cannot compete with success against the free relief given to every applicant by the majority of the hospitals. It is now proved beyond dispute that in the presence of the numerous charities which dispense free medical relief in large towns, the provident system cannot be successfully carried out. It is further admitted that unless the cordial, united, and active co-operation of the managers of all hospitals affording free medical relief be secured, provident dispensaries have not and cannot to any extent check the abuses the out-patient system present. It follows therefore that the active co-operation of the managers of the hospitals must be obtained at the outset, and then, but only then, will it be possible to establish successfully provident dispensaries in every district where their presence seems desirable and necessary. It is not a little remarkable that the majority of hospital managers readily admit that the out-patient department as at present conducted makes it difficult, if not impossible, to control, much less to prevent, the evils attaching to it by perpetuating frauds: (1) on the benevolent, who furnish the funds for the support of medical charities in the belief that their ministrations are confined to worthy recipients; (2) on the members of the medical profession, who give their services to hospitals without payment; (3) on the majority of medical practitioners throughout the country, who are prepared to render their services on equitable terms of remuneration, according to the position in life of the persons who seek their aid; and (4) on the poor, being worthy objects of charity, who are deprived of that amount

[1] Vide THE LANCET, vol. i. 1870, p. 597.

of attention, time, and care which their cases need, and who often suffer in health by the long hours of waiting and overcrowding to which they have to submit in the hospital waiting-rooms. Yet, while admitting all this, the managers have heretofore persistently declined to co-operate and confer together with the object of devising some effectual and adequate plan by which the existing abuses may be once and for ever abolished. It is foreign to our present purpose to analyse the mixed motives which have allowed this amazing apathy to prevail so long; but probably mutual distrust and suspicion, coupled with a feeling that the particular hospital with which each manager happens to be connected is conducted so well that no changes are necessary, are the most general of the causes which have contributed to make the hospital authorities, almost everywhere and as a class, absolutely callous when this question is urged upon their attention. There are not wanting signs, however, that a better spirit is abroad, and the reforms initiated at the London Hospital are calculated to lead to improvement in other medical charities. It was pointed out in these columns (April 21st) that it had been found impossible to work provident dispensaries in East London, owing to the facility with which the working people can get attendance at the London Hospital and free dispensaries. It is hopeless to expect that they will put aside even a penny a week for medicine and a doctor's attendance when these can be obtained for the mere asking. These considerations have moved the Committee of the London Hospital to take active measures to bring about a better state of affairs, and to induce people to help themselves. In reference to their proposal to gradually transfer their patients to the care of provident dispensaries,—which they note with pleasure are being established at the East-end, and will, they trust, soon be in the vicinity of their hospital,—they state their expectation that, whilst the provident dispensaries will relieve the general hospitals of cases which never ought to obtain absolutely free medical relief, the hospitals will in turn receive from such recognised provident institutions cases selected for that high-class professional aid which can be obtained only at the hands of experienced hospital physicians and surgeons. It cannot be doubted that this reasonable expectation will be realised, to the great advantage of the profession, the patients, and all concerned.

UNITED ACTION NECESSARY.

It is possible that at the East-end of London, where the London Hospital has practically no competitors, the action the committee have decided to take will be found effectual, and that the projected provident dispensaries will thrive and prosper under it, because the people have no other hospital within easy reach where they can obtain medical relief for the mere asking. Be this as it may, there can be no question that the hospitals in each district of the metropolis should combine, and, after conference and careful consideration, decide upon some common action in regard to their systems of out-patient relief. This combined action and co-operation might be usefully carried further, as we have more than once urged on former occasions, and might be utilised in other ways for their mutual advantage: for example, in raising funds from the working classes on the Hartshill, Leeds, or Glasgow system, whereby many thousands a year might be added to the hospital exchequer. The formation of the Hospitals Association at this time seems to be a happy idea, as, if properly managed and rightly utilised by the hospital authorities, it ought to lead to combined action on many points by affording a ready means of creating confidence and securing a common platform upon which every question of interest and importance can be fully discussed and wisely determined, to the great advantage of all the hospitals. We believe this to be a very likely result of the establishment of the Hospitals Association, which is attracting a vast amount of support, and which ought to prove in practice an invaluable agency for good. A plan upon which the hospitals might combine has been tried and has proved successful at Boston, U.S., where the common platform is provided by an organisation called the "Associated Charities." This society has been able to establish a system of registration or sort of Clearing-House of Relief, which a personal investigation conducted on the spot enables us to declare to be of the utmost value and importance. It provides a means of securing exact information about the circumstances, history, and necessities of every case. Its work is twofold. First, it collects reports of all relief given by the charities by daily, weekly, or monthly returns, and puts them upon cards kept in alphabetical order. The returns from each institution, charity, or person are put on a separate card. All cards, varying from one to six, relating to one family are fastened together by a hasp, which easily opens to admit a new card. Secondly, the office posts to any society, institution, or person who reports relief to any case, a prompt reply, called a duplication, stating who else is relieving the same case, and what other relief is being given. The contention is that each institution or person who relieves a patient or a poor person is entitled to know, and ought to know, what other relief the family gets from other sources. By such a system alone can fraud be detected and excessive medical or other relief stopped, and at the same time wise decisions be arrived at as to the kind and quantity of relief which should be given. Sometimes families are pauperised by being allowed to obtain too much relief, and sometimes needless suffering is inflicted because the relief is inadequate, or of the wrong kind. The essence of the Boston plan is to secure an exact knowledge of the facts, and so to add to the judgment and joy of the gifts. This system of registration is peculiar to Boston. If it were established in London, and if it were to be supported by the leading hospitals, it would solve the out-patient difficulty and make hospital abuse practically impossible in a very few years, whilst it would secure to the absolutely poor and deserving immediate and exactly the kind of relief they each might require. It is stated, and we can well believe it, that few if any persons have failed to be convinced of the wisdom and helpfulness of this system of registration, after reporting relief and getting back a full statement of the case. The number of private persons who register is rapidly increasing, and very few, if any, institutions have refused to join. Experience has proved the utility of registration; and as the welfare of the whole needy class must be the controlling consideration, the advantages of the system to the poor have made it highly popular and successful. The information kept on the file and entered on the cards is regarded as *strictly secret*, except for the legitimate purposes of deciding about further relief and of detecting imposture. This is now understood by rich and poor alike, and the fear of publicity is thus successfully removed. It seems to us that the information contained in the out-patient registers of all the London hospitals might be made the basis for a similar system of registration in London, and that such a register might be kept up under the direction of the Hospitals Association. It would be a good idea to invite a treasurer of one of the leading hospitals to read a paper on the subject of out-patient relief before the members of the Hospitals Association, to be followed by a discussion. A resolution might then be moved affirming the desirability of instituting a system of registration, and providing for its being carried out at once. This would elicit the views of the hospital authorities not only in London but throughout the country, and could not fail to do substantial service to the cause of reform. It was our intention to have criticised the proposals of the committee of the London Hospital, published at page 957 of last week's LANCET, and to have suggested certain altera-

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tions and additions, but we must defer these remarks until another occasion. Meanwhile we urge all who are interested in the best mode of administering out-patient relief to think over what we have written, and to use their influence where possible to induce the hospital managers to take prompt action in the direction of the remedies here discussed and suggested.

MESSRS. BOWER AND KEATES' CASE.

As we intimated last week, the treatment of Messrs. Bower and Keates—in the first instance by the parents of the child whose life they tried to save by the skilful performance of tracheotomy, and in the second instance by the Public Prosecutor—was the subject of discussion at a meeting of medical men at the house of Sir William Jenner on Monday night. The meeting, from considerations of cubic space, was necessarily limited in size. But it was a thoroughly representative gathering, including men identified with most of the hospitals, physicians, surgeons, and general practitioners from the various districts of the metropolis and its neighbourhood. Sir William Jenner read various letters from gentlemen unable to be present, both in town and from the provinces; amongst these were Sir Andrew Clark, Sir Spencer Wells, and Sir Joseph Lister. Those present included Sir William Jenner, who of course presided, Sir William Gull, Sir James Paget, Mr. Bryant, Dr. Mahomed, Dr. Lauder Brunton, Dr. Bright, Dr. Wilson Fox, Dr. Frederick Roberts, Dr. Russell Reynolds, Dr. Quain, Mr. Jackson, Dr. Stokes, Mr. Jonathan Hutchinson, Mr. Propert, Mr. Brockwell, Dr. Glover, and others. The following resolutions were moved and unanimously agreed to; the first by Sir James Paget, seconded by Dr. Moxon; the second by Dr. James Paget, seconded by Dr. Russell Reynolds:—

"1. That a Committee be formed for the purpose of collecting subscriptions to defray the legal expenses incurred by Messrs. Bower and Keates in their defence against the charge recently brought against them, and of preparing a statement by which subscribers may express their sympathy with these gentlemen and their conviction that the treatment of the case for which they were prosecuted was right. The Committee to consist of the following gentlemen:—Sir William Jenner, Sir James Paget, Dr. Wilson Fox, Dr. Moxon, Mr. Bryant, Mr. Hutchinson, Mr. Jackson, Dr. Glover, Mr. Sidney Turner, Dr. Bright, Dr. Quain, Dr. Mahomed, and Dr. Burnet."

Dr. Quain was appointed treasurer of the fund which it is proposed to raise, and Drs. Mahomed and Burnet honorary secretaries.

"2. That the Council of the Royal College of Physicians and the Council of the Royal College of Surgeons be requested to consider the propriety of representing to the Secretary of State for the Home Department that it is very desirable that there should be some arrangement by which the public prosecutor may obtain the assistance of skilled advisers when he is solicited to institute prosecutions of medical practitioners."

On the motion of Dr. Glover, a vote of thanks to the Chairman was carried by acclamation. Dr. Glover said that Sir William Jenner's kindness and guidance in this matter would give new comfort and assurance to medical men in doing their duty fearlessly.

The feeling of the profession on this subject may be gathered from the fact that already something like £200 has been subscribed. The first list of subscriptions is appended. Without anticipating the careful statement of the case which may be expected shortly from the committee, we may at once say for the profession at large that no case can be more entitled to sympathy, and, let us add, sympathy in a very practical form, than that of Messrs. Bower and Keates. It is trying enough to have to discharge difficult professional duties even when they are generously appreciated; but after doing so to be charged in law courts with malpraxis, to be subjected to misrepresentation, and to be mulcted to the extent of nearly a thousand pounds, is worse still. But worse remains behind. The interposition of the Public Prosecutor adds enormously to the injury sustained by the practitioners in this case, by, first, giving importance to allegations which no person free from prejudice could consider seriously; and, secondly, by throwing the whole costs of the defence on the defendants, though the prosecution was characterised by the presiding magistrate as "persecution." The cruel injury done to the defendants in this case is not lessened by the answer of the Home Office to the defendants contained in THE LANCET of December 1st, to the effect that "the action of the Public Prosecutor was limited to securing complete investigation of the circumstances." This complete investigation carried on privately by the Treasury, though scarcely warranted by the facts, might have been harmless. But carried on in court, and at the defendants' cost, is indeed a use of the office of Public Prosecutor which, however kind in theory, is simply ruinous in practice. We cannot believe that such a misuse of the office will recur. The Royal Colleges will but discharge their duty in responding to the appeal of the profession as represented at the meeting of Monday night, by making such representations to the Government as will secure that the Public Prosecutor will not lay himself open to the charge of being a public persecutor.

The following subscriptions were promised at the meeting:

Sir William Jenner, M.D.	£25	0	0
Messrs. Wakley, Proprietors of THE LANCET	25	0	0
Dr. Moxon	25	0	0
Sir James Paget	21	0	0
Dr. Quain	10	10	0
Dr. Wilson Fox	10	10	0
Dr. Herbert Davies	5	5	0
Mr. Bryant	5	5	0
Mr. William Adams (Regent's-park-rd.)	5	5	0
Mr. J. T. Jackson (Highbury-grove) ...	5	5	0
Dr. Stokes (Highbury)	5	5	0
Dr. Glover	5	5	0
Dr. Bright and Mr. Eyre (Forest-hill)	5	5	0
Dr. F. T. Roberts	3	3	0
Mr. J. Sidney Turner (Anerley) ...	3	3	0
Mr. John Brockwell (Gipsy-hill) ...	2	2	0
Mr. Arthur Evershed (Hampstead) ...	2	2	0
Mr. Foreshall (Highgate)	2	2	0
Mr. E. Baxter Forman (Stoke Newington-road, N.)	2	2	0
Messrs. Hewer and Calthrop (Highbury)	2	2	0
Dr. Hooper May (Tottenham, N.) ...	2	2	0
Dr. Nash (Lansdowne-road, W.) ...	2	2	0
Mr. J. Rand (paid to local fund, Dulwich)	2	2	0
Mr. Sidney Barrow (Kennington-pk-rd)	1	1	0
Dr. Mahomed	1	1	0

The following gentlemen, who either attended the meeting or were unavoidably prevented from doing so, also promised subscriptions, but the sums were not stated:—Sir William Gull, Sir Andrew Clark, Sir Spencer Wells, Sir Joseph Lister, Mr. J. Allen (Alexandra-road, N.W.), Mr. Edgar Barker (Hyde Park-street), Mr. J. Blackstone (Albert-terrace, N.W.), Dr. Blades (Kennington Park-road), Dr. Blasson (Edgware), Dr. Lauder Brunton, Mr. W. F. Butt (Park-street, W.), Mr. Brudenell Carter, Mr. Arthur Durham, Dr. Easton (Norfolk-crescent), Dr. Gibbings (Dalston), Dr. Robert Harris (Hackney), Mr. Christopher Heath, Mr. E. Reynolds Ray (Dulwich), Dr. Russell Reynolds, Dr. H. Cooper Rose (Hampstead), Dr. Sergeant (Camberwell), Mr. Septimus Sibley (Harley-street, W.), Dr. Stocker (Peckham-rye).

Subscriptions will be received by Dr. Quain, treasurer of the fund.

WILLS OF MEDICAL MEN.

THE will and codicil of Thomas Jervis, M.D., of 32, Connaught-square, who died on October 3rd last, were proved on the 16th ult. by Mr. Stroud Lincoln Cocks, Mr. Frederick Benham, and Mr. John Jervis, the son, the executors, the value of the personal estate amounting to upwards of £62,000. The testator, subject to legacies to his executors, Mr. Cocks and Mr. Benham, leaves all his real and personal estate upon trust for his children in equal shares.

The will of Francis Henry Wilson Isles, M.D., M.R.C.S., of Watford, Herts, who died on Sept. 19th last, was proved

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on the 8th ult. by Mrs. Georgiana Isabella Isles, the widow and sole executrix, to whom he gives and devises all his real and personal estate absolutely. The value of the personal estate amounts to over £7600.

The will and codicil of William Highmore, M.D., of Sherborne, Dorset, who died on August 28th last, has been proved by Mr. Robert Newman Barnes Mathews, and Mr. Nathaniel Joseph Highmore, the son, the executors, the value of the personal estate amounting to over £7300. The testator leaves to his wife Mrs. Fanny Matilda Highmore £100 and his furniture and effects; and makes some specific bequests to his sons Nathaniel Joseph and George Edward William. The residue of his real and personal estate is to be held upon trust for his wife for life, and then for his children, regard being had to the amounts to which the children of his first marriage were already entitled.

The will of William Yarde, M.D., formerly Staff Surgeon R.N., late of Fernlea, Beechen Cliff, South Bath, who died on September 19th last, was proved on the 10th ult. by Mr. Giles Yarde, Mr. John Yarde, and the Rev. Edward Yarde, the brothers, the executors, the value of the personal estate exceeding £4400. The testator makes some specific bequests to his brothers and to a nephew, and leaves an annuity to his housekeeper and some pecuniary legacies. One-fourth of the residue of his property is to be held upon trust for his sister Mrs. Ann Yarde and her children, and the other three-fourths are to be divided between his three brothers.

The will and codicil of Abiather Brown Wall, M.D., formerly of Bishop's-road, Bayswater, but late of Lazare Lodge, Isle of Man, who died on June 29th last, was proved on the 2nd ult. by Mr. Reginald Bligh Wall, the son, Mr. John Fuller, and Mr. Charles Jeremiah Mayhew, the executors, the value of the personal estate exceeding £4000. The testator leaves Lazare Lodge and the land attached thereto to his son Reginald, £100 each to his wife and to his executors; and some specific bequests. The residue of his real and personal estate is to be held upon trust for his wife for life, and at her death he distributes it between his daughter Mrs. Mary Fuller and his sons Abiather and Septimus.

The following legacies have recently been left to hospitals and other medical charities:—Mr. James Coulthart, formerly of 228 and 230, Old-street, cabinet-maker, but late of 299, Liverpool-road, £500 each to the Royal Hospital for Diseases of the Chest, City-road, and the Royal Hospital for Incurables.—Mrs. Elizabeth Borradaile, of St. Leonards-on-Sea, £100 each to the British Home for Incurables and the Royal Medical Benevolent College at Epsom, and nineteen guineas to the New Hospital at Hawkhurst, Kent.—Mr. George Digby Wingfield Digby, late of Sherborne Castle, Dorset, £2000 to the Yeatman Memorial Hospital at Sherborne.—Mr. Samuel Lancaster, late of St. Peter's Chambers, Cornhill, and of Walthamstow, £500 each to the Seamen's Hospital, Wanstead, the City of London Hospital for Diseases of the Chest, Victoria-park, the Royal Hospital for Consumption, Ventnor, the Royal Hospital for Incurables, Putney, the Royal Hospital for Diseases of the Chest, City-road, the London Hospital, the Throat Hospital, Golden-square, the Truss Society, Finsbury, and the General Throat Society, Gray's-inn; and £250 each to the Walthamstow Dispensary and the Walthamstow and Leyton Hospital for Children.—Miss Elizabeth Ann Cook, late of Neen Solars, Salop, £200 each to the London National Hospital for the Paralysed and Epileptic, the London Hospital for Consumption and Diseases of the Chest, and the Birmingham Eye Infirmary.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5365 births and 3568 deaths were registered during the week ending the 8th inst. The annual death-rate in these towns, which had been equal to 22·7 and 23·0 per 1000 in the two preceding weeks, declined last week to 21·6, a lower rate than in any recent week. During the first ten weeks of the current quarter the death-rate in these towns averaged 21·1 per 1000, against 21·2 and 21·9 in the corresponding periods of 1881 and 1882. The lowest rates in these towns last week were 14·0 in Oldham, 16·6 in Bradford, and 16·7 in Portsmouth. The rates in the other towns ranged upwards to 26·1 in Manchester, 26·2 in Halifax, 26·5 in Birkenhead, and 32·8 in Preston. The 449 deaths referred to the principal zymotic diseases in the twenty-eight towns showed a decline of 18 from the number in the previous week; they included 131 from scarlet fever, 98 from measles, 73 from whooping-cough, 59 from "fever" (principally enteric), 39 from diarrhœa, 35 from diphtheria, and 14 from small-pox. These zymotic diseases caused last week the lowest death-rates in Portsmouth and Norwich, and the highest in Sunderland and Leeds. Scarlet fever was most fatal in Leeds, Newcastle-upon-Tyne, and Preston; measles in Birkenhead, Salford, and Derby; whooping-cough in Brighton and Huddersfield; and "fever" in Wolverhampton and Plymouth. Of the 35 deaths from diphtheria in the twenty-eight towns, 23 occurred in London and 3 in Nottingham. Small-pox caused 5 deaths in Sunderland, 4 in Birmingham, 3 in Liverpool, and 2 in London. The number of small-pox patients in the metropolitan asylum hospitals, which had been but 47 and 49 on the two preceding Saturdays, rose to 74 at the end of last week, a higher number than has been under treatment in these hospitals since May last; 29 new cases were admitted last week, against but 8 and 11 in the two previous weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last, 3 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 493 and 453 in the two preceding weeks, further declined last week to 448, and were 56 below the corrected weekly average. The causes of 84, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, and in three other smaller towns. The proportions of uncertified deaths were largest in Wolverhampton, Oldham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 25·1 and 22·7 per 1000 in the two previous weeks, further declined to 21·7 in the week ending the 8th inst.; this rate was 0·1 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 13·6 and 17·0 in Leith and Perth, to 23·4 and 24·8 in Glasgow and Aberdeen. The deaths in the eight towns included but 70 which were referred to the principal zymotic diseases, against 97 and 79 in the two preceding weeks; 16 resulted from diphtheria, 16 from whooping-cough, 10 from scarlet fever, 10 from diarrhœa, 9 from "fever" (principally enteric), 8 from measles, and 1 from small-pox. These 70 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·3 the mean rate from the same diseases in the large English towns. The rates from these diseases in the Scotch towns ranged last week from *nil* in Leith and Perth to 3·9 in Glasgow and 4·8 in Aberdeen. The fatal cases of scarlet fever, which had been 30 and 16 in the two previous weeks, further declined to 10 last week, of which 6 occurred in Glasgow and 3 in Edinburgh. The 16 deaths from whooping-cough showed, however, an increase upon recent weekly numbers, and included 12 in Glasgow and 3 in Aberdeen. The 16 deaths referred to diphtheria corresponded with the number in the previous week; 5 were returned in Aberdeen, 4 in Glasgow, and 3 in Paisley. The 9 fatal cases of "fever" showed a further decline from recent weekly numbers. Of the 8 deaths from measles 4 occurred in Glasgow and 4 in Edinburgh. The fatal case of small-pox was registered in Glasgow, and was stated to be unvaccinated. The 115 deaths referred to acute diseases of the lungs in the eight towns showed a further decline from recent weekly numbers, and were no fewer than 70 below the number in the corresponding week of last year. The causes of 71, or 14 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 33·0 and 25·7 per 1000 in the two previous weeks, rose again to 33·3 in the week ending 8th the inst. The mean death-rate in the city during the first ten weeks of the current quarter was equal to 26·9 per 1000 in Dublin, whereas it did not exceed 20·0 in London and 19·2 in Edinburgh. The 223 deaths in Dublin showed an increase of 51 upon the number

in the previous week; they included 16 from scarlet fever, 6 from "fever," 4 from whooping-cough, 1 from measles, 1 from diarrhœa, and not one either from small-pox or diphtheria. Thus 28 deaths resulted from these principal zymotic diseases, against 27 and 15 in the two previous weeks; they were equal to an annual rate of 4·2 per 1000, while the rate from the same diseases was but 2·7 both in London and in Edinburgh. The fatal cases of scarlet fever in Dublin, which had been 16 and 6 in the two previous weeks, rose again to 16 last week. The deaths from "fever" and whooping-cough also showed an increase upon the numbers in the previous week. The deaths of infants differed but slightly from those in recent weeks, while those of elderly persons were more numerous. The causes of 39, or more than 17 per cent., of the deaths registered during the week were not certified.

ZYMOTIC DISEASES IN ITALY.

The Home Department of the Italian Government now issues a monthly sanitary bulletin for the entire kingdom, which, if not so complete and precise in its information as the Spanish monthly return of mortality statistics, contains some valuable statistics bearing upon the prevalence of zymotic diseases in Italy. We have recently received a copy of this return for September last, which bears date November 8th. The return professes to give the "denounced" or reported cases of four infectious diseases, with the number of deaths from the same diseases in the various departments and communes of each of the provinces of Italy in September. The diseases dealt with are small-pox, measles, scarlet fever, and diphtheria; an examination of the figures, however, appears to throw doubt upon the relative accuracy of many of the figures showing cases and deaths. It would add materially to the value of this return if the population of the various communes were added, and if a summary of the figures for the entire kingdom were also given, to afford the means for comparison with the statistics for previous months. Only 55 fatal cases of small-pox are reported in the table, although the fatal prevalence of the disease is noted at Bosa in Sardinia, to have caused 135 deaths. Measles was prevalent in Sicily, between 1000 and 2000 cases being reported, the mortality showing a large proportion in some localities; for instance, in Palma commune 20 deaths were reported and not more than 60 cases of attack. The relation between cases and deaths shows most remarkable variations as regards scarlet fever. The feature of the return is the evidence it affords of the very general prevalence of diphtheria throughout the kingdom, more especially in Sicily, which appears to suffer from zymotic diseases more than most of the provinces on the main land. In order rightly to appreciate the value of this return, it is necessary to know the nature of the machinery by which the figures are collected, to which no clue is given.

THE SERVICES.

ARMY MEDICAL DEPARTMENT. — Brigade Surgeon Eugene Francis O'Leary, M.D., is granted retired pay.

ARTILLERY VOLUNTEERS. — 1st Norfolk: Alexander Mitchell, Gent., M.D., to be Acting Surgeon.—1st Sussex: Henry Algernon Hodson, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS. — 1st Dumbartonshire: Acting Surgeon Benjamin Maule Richard resigns his appointment. —18th Lancashire (Liverpool Irish): Surgeon and Honorary Surgeon-Major Daniel Walter Parsons resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement.—2nd Perthshire (the Perthshire Highland): Peter M'Callum, Gent., to be Acting Surgeon.—7th Surrey: Acting Surgeon Edmond James Lawless to be Surgeon.

ADMIRALTY. — The following appointment has been made:—Surgeon John Mackie to the *Wasp*, vice Arthur Kees, to the *Revenge*, in exchange.

THE TEMPERANCE QUESTION.—The result of a house-to-house canvass in Dumbarton on the desirability of the establishment of Local Option shows 3719 in favour, 243 against, 191 neutral. The signatories were all above eighteen years of age; and the votes, we are informed, have been thoroughly and impartially scrutinised.

Correspondence.

"Audi alteram partem."

"THE SURGICAL TREATMENT OF TUMOURS OF THE BLADDER."

To the Editor of THE LANCET.

SIR,—As we considered that any omissions we might have made in our paper on "The Surgical Treatment of Tumours and other Obscure Conditions of the Bladder" had been sufficiently amended by Sir H. Thompson in his first letter to you on "Digital Exploration of the Bladder" (THE LANCET, p. 794), we did not reply to his strictures, for we believed that a careful perusal of our paper would show that the charges laid against us were not warranted. But since Sir Henry has returned to the subject with renewed tenacity in your last week's issue, we have no alternative but to reply.

In his first letter Sir Henry takes objection to our reporting, by "Thompson and by Whitehead," a "total of fourteen cases, with six recoveries and six deaths, whilst in one case very serious hæmaturia was cured and in another the symptoms were relieved" (THE LANCET, pp. 630 and 794), because he himself had explored the bladder in twenty-seven cases. Now, let us look at the facts. The context of the above quotation (p. 629) shows that the fourteen cases referred to were all male cases, and cases of vesical tumour; and as it is obvious, from other parts of our paper, that up to that time Mr. Whitehead had only operated on four males, it is clear that the remaining ten cases are Sir H. Thompson's male cases. But Sir Henry has repeatedly told us that he has operated on twelve cases of tumour in the bladder. We have recognised that fact; the missing two cases occurred in females, and as we did not consider there was anything specially new and original in the removal of tumours from the female bladder (the operation had been done by Warner as early as 1747),[1] we consequently included them, without any remark, in our general analysis of a total of twenty-eight cases of tumour in the female (p. 675). We are sorry that we did not state that two of those cases were Sir H. Thompson's, but in omitting to do so, we only treated him like the other twenty surgeons, whose reported cases we had taken the liberty of analysing.

With regard to the total number of cases in which digital exploration of the bladder had been performed, we state that it had been made twenty-five times on the *male* subject (p. 675). This total includes Sir H. Thompson's ten male tumour cases, and eight additional ones in which no tumour was found, but of which a good abstract was given in the LANCET of Feb. 10th, 1883. If we add to these eighteen cases the two female cases above mentioned, we gain a total of twenty cases of digital exploration performed by Sir H. Thompson, of which we have taken due notice; but he claims twenty-seven cases up to June 16th. That we have excluded the extra seven cases we are willing to allow, but not, however, because, as Sir Henry suggests, his most important paper had escaped our notice, for we were careful to analyse his tumour cases reported at the same time. The reason is that in the report of the Transactions of the Medical and Chirurgical Society, which appeared in THE LANCET of June 16th, there is but the merest mention of the extra cases as having been operated upon and relieved, without even the sex of the patients being mentioned. That this was so is obviously, as Sir H. Thompson states, due to the fact that cases of tumour were the "sole object of the paper," but still as the report was so meagre we were unable to make use of them.

In THE LANCET of December 8th, Sir H. Thompson again returns to the attack on the grounds of historical accuracy *à propos* of Liston's case of exfoliation of the mucous membrane of the bladder, or, as he considered it, "a cyst or false membrane of the form of the bladder itself." That we were fully aware this case was not one of tumour of the bladder is shown by our statement (p. 582) that "true cystic growths in the bladder are, so far as we are aware, unknown; but there is a reference to a cyst or false membrane, which was removed by Liston by supra-pubic cystotomy, the cyst being the shape of the interior of the bladder."[2] We had

[1] Cases in Surgery, Fourth Edition, 1784, p. 303.
[2] "Medical Times and Gazette, Aug. 2nd, 1862."

not the advantage of Sir H. Thompson's intimate acquaintance with the case, but were entirely dependent on Dr. Knox's account of it, and as the latter acted as Liston's assistant at the operation, we thought his report of it likely to be correct; but it appears from Sir Henry's letter that the account given in the catalogue of the College of Surgeon's Museum differs from that of the eye-witness of the operation. Dr. Knox says that Mr. Liston's view of the case was that "a cyst or false membrane of the form of the bladder itself occupied, as he conjectured, the interior of the bladder and, were this removed by operation, the patient might recover;" and then later on in the same report Dr. Knox states "with a straight sharp-pointed bistoury, which he usually carried in his waistcoat-pocket, he (Mr. Liston) opened the bladder above the pubes, and as the incision proceeded there escaped from the bladder a foreign body resembling a cyst or false membrane, as he and I concluded it to be, and of the shape of the interior of bladder." Now here we have an account of the diagnosis of a morbid growth in the bladder and a deliberate operation for its removal, and consequently it is a question whether Sir H. Thompson is historically accurate when he states that "the so-called 'tumour' was simply an exfoliation of the mucous membrane, and was met with by him (Mr. Liston) when tapping an old man for retention from prostatic disease." Though it is true that this was not strictly a tumour of the bladder, it is perfectly true that Liston diagnosed some cyst in the bladder, and as such proceeded to remove it; and consequently we maintain that when dealing with the history of such an operation as the removal of tumours from the bladder this case is worthy of a place, inasmuch as the operator when dealing with it undoubtedly considered that he had to do with a disease analogous to, if not identical with, true cysts. We quite agree, from the account given of it by Dr. Knox, in thinking with Sir H. Thompson that the case was not as Liston thought it—"a cyst or false membrane," but a case of exfoliation of the entire mucous membrane of the bladder.

In conclusion, we can but express the hope that our explanation is satisfactory to Sir H. Thompson, and assure him that we also "welcome fresh evidence in favour of the new method of examining and operating in obscure vesical disease." We are, Sir, yours obediently,

WALTER WHITEHEAD,
Dec. 8th, 1883. BILTON POLLARD.

ARREST OF THREATENED MAMMARY ABSCESS.

To the Editor of THE LANCET.

SIR,—In cases of threatened mammary abscess, I have for many years, with very successful results, given three consecutive doses of ten grains of quinine at intervals of twelve hours, at the same time using the usual local application of belladonna. The administration of quinine in these cases, although its anti-suppurative power is well known, is not practised by anyone with whom I have conversed, but I have myself found it so successful that I think it deserves to be in general use, especially as the disease is so painful and so exhausting to the system. The best cases for the treatment are those occurring during lactation, and it is less suitable immediately after labour. It is unsuitable if the bowels are confined and the tongue furred. There are some patients who do not bear such large doses of quinine, in which case a first dose of ten grains may be followed by two of five grains each. I originally saw this treatment recommended in a French medical journal, and claim therefore no originality. I have frequently seen the pain and tenderness disappear within forty-eight hours, although a little hardness will remain for some days or longer, and the inflammatory symptoms may recur, and may be again at once checked by the same treatment. A recurrence, however, is rendered less likely if the belladonna is continued for a time, although pain has ceased. No doubt some will say that the success of the treatment is owing to the belladonna, and not to the quinine. I used the belladonna for years before I used the quinine in addition, and was struck with the greater rapidity and certainty of the result when the quinine also was used. At the same time I admit the difficulty, when two drugs are employed, of apportioning to each its real value.—I am, Sir, yours truly,

Leeds, Nov. 1883. JAMES BRAITHWAITE, M.D.

PHYSIOLOGY OF THE THYROID GLAND.

To the Editor of THE LANCET.

SIR,—General attention having been drawn to the physiology of the thyroid gland, in consequence of the recent interesting discussion on myxœdema at the Clinical Society, I may perhaps be allowed to mention some facts in the histology of the gland which have an important bearing on its function. A series of researches on this subject, which I have made under the direction of Dr. Klein, and which are published in the Philosophical Transactions of the Royal Society for 1876 and 1881, have shown, amongst other things, that not only is a homogeneous or finely granular viscid material (termed "colloid") found in the vesicles of the thyroid gland, but that a substance morphologically identical with this is found in the lymphatics, with which this organ is very richly endowed. It is therefore reasonable to conclude that a material is formed in the vesicles which is carried off by the lymphatics of the organ. I have farther shown that the colloid material in the vesicles is largely formed by the destruction of red blood-corpuscles which have entered the vesicles, as red blood-corpuscles are frequently found in the vesicles in all stages of disintegration and decolorisation—in fact, in such a state as to show beyond doubt that they had entered during life. There is therefore, no doubt, I consider, that the thyroid gland exercises some general influence over the composition of the blood. Why a deposit of mucin should take place in the tissues in cases of myxœdema and cachexia strumipriva (supposing these two diseases to be analogous) is more difficult to explain, but it may be suggested that if the elimination of "colloid" material or its constituents from the blood be prevented by excision or atrophy of the thyroid gland, a transudation of these substances into the connective tissue generally may take place. This presupposes that on its way back to the circulation through the lymphatics the colloid material becomes changed in character. This is, of course, only theory, and must be taken for what it is worth. My object at present is to draw attention to some of the already ascertained facts of the histology and function of the gland. As soon as opportunity offers I intend to continue my researches in this direction.

I am, Sir, yours obediently,
E. CRESSWELL BABER, M.D. Lond.
Western-road, Brighton, Dec. 3rd, 1883.

"SPORADIC CRETINISM."

To the Editor of THE LANCET.

SIR,—With regard to the correspondence in your last number upon sporadic cretinism in relation with absence of the thyroid, communicated by Sir William Gull, I beg, with due deference to this great authority, to offer a few remarks, more especially upon its pathology. During two years' residence as medical officer to the Asylum for Idiots, Earlswood, it was my good fortune to meet with many of these cases; and as feebleness of intellect (not infrequently amounting to complete idiocy) is the mental condition of those afflicted, their admission into Earlswood and their absence from the cliniques of general hospitals is easily accountable. The late Dr. Hilton Fagge, who made several visits to the above institution, clearly observes that their physical condition presents a remarkable unity of appearance, so much so that they bear a close family relation; the analogy is true of their mental condition, and anyone acquainted with the type can predict with a fair amount of accuracy, judging from past experience, what advance a child in this condition is likely to make under a special system of education.

The presence of tumours above the clavicles (the so-called latent thyroid), and the absence of the normal thyroid are not necessary concomitants of sporadic cretinism—indeed, they appear to be the exception; for in a number of post-mortems performed by me during that period I do not remember an instance of a complete absence of the normal thyroid. My late colleague, Dr. Grabham, now Commissioner in Lunacy for New Zealand, made a post-mortem in a case of sporadic cretinism where there was a true goitrous enlargement. This condition is described as not uncommon in endemic cretinism. We must thus look elsewhere for the true cause of this peculiar condition; and it is unlikely that

the presence of such a physiologically unimportant structure as the thyroid gland should exercise such a potential capacity for "counteracting influences." Virchow describes the disease as originating during fœtal life in an unnatural tendency to ossification which the discs of cartilage along the basi-cranial axis possess, giving the head the peculiar roundness, &c., the long bones also of the extremities tending to ossify at the epiphysis are suggested to account for their stunted growths. Surely this is insufficient to account for all the phenomena. Dr. Langdon Down, another great authority upon the subject, has described cases, apparently of this type, as due to parental causes—viz., "drunkenness during conception." Such a history is certainly not the case in many at Earlswood. There does not seem to me sufficient grounds for regarding either of the above theories as facts of causation. The presence of a thyroid in most, its goitrous enlargement in one, the general characters of the disease, always so similar, and the absence of any history of drink, as a rule, on the part of the parents, point strongly to some other cause. In the history of these patients, as obtained at Earlswood, I found them to be most frequently the youngest in a large family, in some the tenth, twelfth, or even fifteenth child; in no case, as far as I remember, was there a primogeniture; they were most often males, with a strong predisposition to catarrhal inflammations, which tend to be protracted and readily reinduced upon any slight exposure; the parts most prone to suffer varying in different individuals, rarely would the lungs escape; indeed, so frequent was this the case that my colleague proposed to call them strumous or scrofulous cretins. I have frequently observed that they rarely live much beyond puberty, in almost all cases dying from various tubercular diseases, which they only sometimes inherit. Not infrequently disparity in the age of the parents has been noted as a cause. In the latter two of the above antecedents we see that circumstances occur which are highly disadvantageous to the well-being of the offspring; the exhaustion from repeated pregnancies, the occasional tubercular diathesis of the parent, and the not infrequent disparity of age—all three sometimes co-operating—are prime factors in the pathology of the disease. Comparative anatomy not rarely points to a general want of vitality in the last of a large brood of offspring. These factors, which are greatly underrated, it has been my intention to emphasise. I am, Sir, your obedient servant,

London, Dec. 10th, 1883. ROBERT JONES, M.B.Lond.

To the Editor of THE LANCET.

SIR,—Whilst preparing the article in Quain's Dictionary of Medicine on "Goitre" I received the following letter from Dr. Hilton Fagge, which, taken in connexion with Sir William Gull's communication of last week, will, I am sure, be read with interest:—

"11, St. Thomas's-street, Southwark, S.E., Jan. 6th, 1876.

"DEAR SIR,—In reply to your questions:—1. It is my belief that whenever the thyroid gland is congenitally absent cretinism is always present. 2. I cannot say that the cervical tumours are always present. Certainly they are sometimes indistinct; this sign may vary very much in the same patient at different times. 3. As regards the theory of the formation of such fatty tumours when the thyroid is absent, I have no kind of explanation to offer. I have been accustomed to think of it as as inexplicable as Darwin's fact that cats of a certain colour are always blind.

"Truly yours, C. HILTON FAGGE."

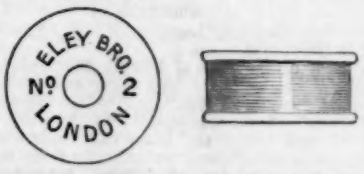
I am, Sir, yours faithfully,

Duchess-street, W., December 8th, 1883. PUGIN THORNTON.

FOREIGN BODY EXPELLED FROM THE STOMACH BY VOMITING.

To the Editor of THE LANCET.

SIR,—On Thursday, Feb. 23rd, 1871, C—— C——, aged five years, was playing with a whistle made by uniting the brass ends of two central-fire cartridge cases, when it slipped into the pharynx and there remained, causing great pain, but no dyspnœa or other urgent symptom. His mother, in fear "lest the brass should poison him," brought him, walking, to the surgery; but they had not gone more than a mile when he suddenly cried out that "he had swallowed it, and was all right," as he indeed seemed when seen by me an hour afterwards. An emetic of antimonial wine was ordered, to dispose of any dissolved metal or other filth, and a full dose of castor-oil to assist the expulsion of the whole machine. Violent vomiting occurred during the night and following morning, and about midday the whistle was thrown up, little the worse for its night's lodging, but filled with half-digested, starchy food, and slightly corroded by the gastric juices as its edges.



The above case was recalled to my mind by Dr. Glover's communication in THE LANCET of Oct. 13th, 1883, and is copied *verbatim* from my note-book. That so large a foreign body could be swallowed by so young a child is curious, but that it could return from the stomach by the same route, passing from the lesser to the greater orifice of a funnel, may be evidence of the truth of Schiff's observation of an "active dilatation" of the cardiac orifice during the act of vomiting. I am, Sir, yours obediently,

East Rudham, Oct. 14th, 1883. ALAN REEVE MANBY.

THE PROSECUTION OF UNQUALIFIED PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—*A propos* of the comments in THE LANCET on the protection afforded by the College of Physicians to medical men, I would draw your attention to the enclosed copy of a letter I received from the College of Surgeons when applying to them for protection against an unqualified man who was practising as a surgeon in my district. I think you will agree with me that it is very necessary either that the State should prosecute such charlatans, or that it should be compulsory on the licensing bodies to do so. I would remark that that much-maligned body, the Society of Apothecaries, at once took up the case, and I think it is but right that those about to qualify should know from whom they may expect assistance in case of need.

I am, Sir, yours truly,

December 7th, 1883. M.R.C.S., L.S.A.

[COPY.]

Royal College of Surgeons of England, Lincoln's-inn-fields, W.C., Aug. 6th, 1883.

DEAR SIR,—To your letter of the 3rd instant I have to reply as follows—viz.:

1. That I presume that you base your claim for assistance from the College, in the circumstances you state, upon Section 17 of the Bye-laws, by which the Council undertake to "protect and defend" a member of the College "who may be disturbed in the exercise and enjoyment of the rights, privileges," &c., acquired by him as a member.

2. That if you do so it is on a misconception of the protection which the Council undertake to afford you, such protection not being applicable to the case you quote.

3. That if any person called in question your right to practise as a surgeon the case would be different.

4. That the College has no power to interfere with the person to whom you allude, and to restrain him from practising.

5. That the College cannot undertake to prosecute every unqualified person who chooses to practise.

6. That if the person you name were to describe himself, either in writing or by a door-plate, as being a surgeon without any right to that title, he could be proceeded against under Section 40 of the Medical Act of 1858, either by you or anyone else, and, if convicted, would be liable to a fine of £20.

7. And that, further, if it could be shown that this unqualified man described himself, in writing or otherwise, as being a member of this College, the Council would then be bound to take proceedings against him.

Yours faithfully,

EDWARD TRIMMER, Secretary.

"MODES OF DEATH IN THE EXECUTION OF ENGLISH CRIMINALS."

To the Editor of THE LANCET.

SIR,—As I have witnessed executions by both Marwood and Binns, would you allow me to say a few words with reference to Dr. Richardson's remarks on judicial hanging?

1. The pulse continues to beat for quite as long a period after death from injury of the medulla as he mentions as occurring in death from simple apnœa; it is of no particular importance in either case.

2. Binns used, in the case of Powell, executed at this prison, nearly, if not quite, as long a drop as Marwood. I do not offer an opinion on the "legality" or otherwise of the "long drop." I cannot myself see that the words "hung by the neck until dead" necessarily imply death by asphyxia or apnœa, though they undoubtedly seem to indicate the lapse of a period somewhat longer than is occupied in death by the long drop, which, as far as can be seen, is almost, if not quite, instantaneous. The long fall (seven to nine feet) produces injury or shock to the cord below the medulla, with dislocation or fracture of the vertebræ, rupture of muscles and bloodvessels, and tight compression of the trachea. How Dr. Richardson arrives at the conclusion that this instantaneously fatal violence (presumably) can be more painful than slow asphyxia to the extent that warrants the use of the words "exquisite torture," or a death by "fire compared to that by water," it is difficult to understand, and I do not think the conclusion is true or warranted by observation. There is much less movement after death by the long fall—in fact, there is seldom any; and if convulsions are not accompanied by pain, their entire absence cannot be considered to indicate its presence.

3. I think the proposition that a post-mortem examination should be had recourse to to prevent the criminal from being buried alive, is most preposterous. This would be equivalent to reviving the old custom of "drawing and quartering" after an execution, and is not, I conceive, one of the duties of a medical man. If any case can be adduced in which there is any reasonable doubt of life not having been extinct before burial of late years, a longer period might be allowed to elapse between the execution and the interment. The objection, however, must of necessity be a merely sentimental one, as you have already done your best to produce death by apnœa (preferably according to Dr. Richardson).

Unless chloroform, morphia, or some similar agent is used, I can conceive no mode of destroying life more humane than the long drop. The shock of electricity would, I think, be quite as painful. An execution will always be a repulsive sight, but cannot, I think, fairly be called, as far as physical pain to the criminal is concerned, an inhuman one.

I remain, Sir, yours very truly,

H. B. WYNTER, M.D.,

Dec. 8th, 1883. Medical Officer to H.M. Prison at Wandsworth.

"THE LIVERPOOL CANAL MURDER."

To the Editor of THE LANCET.

SIR,—According to a paragraph on the Liverpool canal murder case, I am reported to have sworn in my evidence that the blood found on the stone was human. This I positively deny, as I expressed no opinion whatever on that point, nor was I asked to give one. I however stated that the short hairs found on the stone appeared to me to be human hairs (probably from the eyebrow), as they exactly corresponded, both as regards naked-eye and microscopical appearances, to hairs that I removed from the uninjured eyebrow for the purpose of comparing them with those found on the stone.—I am, Sir, yours obediently,

Liverpool, Dec. 12th, 1883. RHINALLT N. PUGHE.

STONEY MEMORIAL FUND.

To the Editor of THE LANCET.

SIR,—At a largely attended and representative meeting of past and present students of the Carmichael College, held on the 9th ult., it was decided to found a memorial to the late Dr. Loftie Stoney, and a committee was appointed to raise funds necessary for the purpose. It was also decided to invite the co-operation of those gentlemen not present at the meeting, who might be willing to further the movement which it is intended shall result in the foundation of a memorial prize. A large number of Dr. Stoney's former friends and colleagues having already identified themselves with the movement, and formed the committee, I beg to draw the attention of others to the matter, in the hope that they will allow their names to appear as subscribers to the fund.

Trusting that this will catch the eye of many in the public services or the colonies who owe their early and favourable impressions of medical study to the genial and kind-hearted tutelage of Loftie Stoney,

I am, Sir, yours faithfully,

L. H. ORMSBY, M.D., F.R.C.S.,

Hon. Treasurer, Stoney Memorial Fund.

4, Merrion-square West, Dublin, Dec. 4th, 1883.

P.S.—Subscriptions varying from £5 to 5s. have been received, and any sum sent to me, or the committee, will be thankfully acknowledged.

BIRMINGHAM.

(From our own Correspondent.)

CHILDREN'S HOSPITAL.

AT a meeting of the Committee of Election, held on the 10th inst., Dr. Drury, one of the extra acting physicians, was elected to the post of acting physician in the place of Dr. Jordan, who has served his twenty years of office. There were two vacancies for extra acting physicians, which were filled by the appointment of Dr. Richards and Dr. Annie Clark. Among nine candidates of exceptional merit, it is interesting to note the election of a lady doctor, who polled twenty-one votes to twenty obtained by a M.D. of London, who is also one of the physicians to the Queen's Hospital. The appointment of a lady to this post is an experiment which time will prove the value of, but according to the experience of the same institution with regard to house-surgeons, the plan cannot be said to have worked well for the interests of the hospital, or the comfort of the residents of the opposite sex.

DENTAL HOSPITAL.

On the 12th inst. a grand amateur concert was given in aid of the funds of this deserving hospital. The programme was well selected, and sufficiently varied to gratify the tastes of a large and discerning audience. The proceeds, we hope, will meet the expectations of the promoters and leave a good surplus for the hospital.

PUERPERAL PERITONITIS.

An inquest was held by the Borough coroner on the 7th inst., on the body of a woman aged twenty-three, whose death was certified as parturition and peritonitis. As this was the fourth case attended by the same practitioner since Nov. 17th, in which the deaths were certified to have arisen from the same causes, it was deemed advisable by the registrar that an inquiry should be held. In the expert evidence given, it was asserted that in the one case, where the illness lasted from Nov. 15th to Dec. 2nd, the period was so long as to throw a medical man off the scent that he was conveying an infection. The precise meaning of this is difficult to solve, but as it was evidently meant to exculpate the attendant, it must not be accepted as a scientific explanation, much less as one which would convey an accurate knowledge of the various forms of puerperal septic infection, and the processes they go through.

HEALTH OF THE TOWN.

Small-pox continues to play an important *rôle* among prevalent diseases. During the week ending December 8th twenty fresh cases were admitted into the hospital. Scarlet fever also is very widely spread. Owing to these circumstances the Town Council have appointed a medical officer to the Borough Hospital, at a salary of £150 a year, whose duty it will be to exercise supervision over these infectious cases. The death-rate of the town compares favourably with other large centres, but in making the estimates it must not be forgotten that a large number of the poorer class have been driven from the borough by the improvement scheme of late years, and gone to swell the mortality of outside districts.

MANCHESTER.

(From our own Correspondent.)

MEDICINAL VALUE OF ALCOHOL.

THE offer recently made to the Royal Infirmary, through the Rev. Dr. Burns and Mr. Cash of London, of £1000 for experiments respecting the medicinal value of alcohol, was refused by the Board at their last meeting, they acting upon the advice of the medical committee, who reported to them as follows:—"First, the conditions necessary for arriving at a trustworthy conclusion as to the value of alcohol by a logical method of difference as comprised in the scheme cannot possibly be realised; and, therefore, any conclusion arrived at, whether in favour of or against alcohol, might lead to a disastrous practice, either by an undue extension or curtailment of the use of any drug. Secondly, alcohol in its various forms is given in this hospital as medicine, and not as an article of diet. As a medicine it is of great value in the treatment of disease, and at times essential for the saving of life. This being so, they can only consider the course suggested in the letter submitted to them as an experiment which involves the lives of their fellow-creatures, and cannot therefore be countenanced." The conditions upon which the above sum was offered were that a ward should be set apart for twelve months in which all patients without distinction should be treated absolutely without the use of alcoholic stimulants, and the results and mortality compared with those obtained in the other wards of the infirmary.

THE MEDICAL SOCIETIES.

Our various societies have now got well to work again. At the last meeting of the Medico-Ethical Society the subject of compulsory notification of infectious disease, which has been in operation in this city for more than twelve months, was brought up for discussion, the general conclusion arrived at being that it had worked smoothly and without difficulty between the profession and the health authorities of the corporation. At a meeting of the Medical Society (which now meets in the new and commodious rooms in the college), held on the 5th inst., Dr. Thorburn was elected a trustee of the Society, in place of the late Dr. Borchardt, whose death was recently chronicled in your columns. The post-mortem examination on the deceased gentleman revealed the fact, which was suspected during life, that he was suffering from malignant disease of the large intestine, which had caused complete occlusion of the bowel. The Students' Debating Society is in a most flourishing condition, both financially and numerically, comprising now between seventy and eighty members. Another sign of the vigour and growth of our medical school is shown by the fact that in the past two years, in addition to the annual medical dinner, which is held at the commencement of the winter session, and which was formerly attended equally by students and by gentlemen engaged in practice, we have had a students' dinner. This came off most successfully on the 29th ult., at the Grand Hotel, under the presidency of Dr. Morgan, when more than 100 sat down, who, with the exception of some half-dozen members of the staff, were all *bond-fide* students. Advantage was taken of the occasion to present Dr. Fraser, late demonstrator of anatomy, with a handsome gold watch, subscribed for by the students, as a token of their regard towards him, and an earnest of their good wishes for his future success in Dublin, where he had lately received an appointment as lecturer on anatomy.

OPEN SPACES.

A deputation from the Manchester and Salford Sanitary Association waited last week upon the Mayor of Manchester, to urge upon him and the corporation the desirability of increasing our much too few open spaces and playgrounds for recreation within the city boundaries. The deputation included Dr. Ransome, Mr. Oliver Heywood, Mr. Chadwick, Dr. Watts, Mr. Horsfall, Mr. G. Milner, and other influential members, who were courteously received and their statements carefully listened to; but the old arguments were brought forward about the great expense attaching to such improvements, and that, whilst fully admitting the desirability of all that the Association urged, they had not the funds necessary to carry out such schemes.

HEALTH LECTURES.

The Association has continued its series of "Health Lectures for the People" this winter. It has endeavoured to give a general uniformity to this series under the title of Sanitary Biology. Thus it includes breathing, washing, drinking, working, thinking, eating, seeing, hearing, and sleeping. The fourth and fifth lectures, on working and thinking, were delivered on Nov. 23rd and Dec. 7th by Drs. Tomkins and Dreschfeld respectively.

SCARLET FEVER OUTBREAK.

During the past three months a considerable outbreak of scarlet fever has occurred in Manchester and the district, and as yet shows no sign of abatement, sixty-nine fresh cases having been reported to the medical officer of health in the week ending Dec. 1st within the municipal boundaries alone, whilst it is prevalent also in the adjoining borough of Salford and in the outlying suburbs. At the present time not less than 200 cases are under treatment in hospital. The mortality has raised the death-rate considerably. In ordinary times we stand very high on the list of large towns, but according to the returns of the Registrar General for the week ending Nov. 17th it was the highest of any town in the kingdom, showing a death-rate of 33·4 per 1000. It is but fair, however, to state that according to the calculations of the medical officer of health it is somewhat lower than this—viz., 31·8.

SCOTTISH NOTES.

(From our own Correspondent.)

DUNDEE ROYAL INFIRMARY.

EVENTS have proved the wisdom of the directors of this institution in providing separate accommodation for children within the infirmary, rather than favouring a scheme for the equipment of an entirely distinct charity. The friends of the latter proposal, as well as the richer members of the community, have joined with the directors so enthusiastically that at the opening of the new ward the other day, it was announced that £6000 had been subscribed as an endowment fund to meet the claims arising from the extension. The ward which has been appropriated for the children's use measures about 100 feet by 20 feet, is divided by an arched partition into a medical and a surgical division, has accommodation for about thirty cots, is tastefully decorated, and fitted with all conveniences for nursing, &c. Several of the cots have been named by friends in the town, who have each subscribed £200; and a payment of £1000 gives a perpetual right of nomination to a bed. The physicians to the hospital, Drs. Duncan and Sinclair, will alternately take charge of the medical cases, and the same arrangement in the larger surgical division will be carried out by Drs. Macewen and Steele Moon. The opening ceremony attracted a crowd of visitors, who seemed much pleased, not only with the new department, but with the whole management under Dr. McCosh. On Monday last the governors agreed to the provision of adequate accommodation for the nursing staff, and some additional store-room, at an estimated cost of £2400. They also agreed to the extension of the system of free admissions on the recommendation of any of the medical officers.

SOUP DINNERS FOR SCHOOL CHILDREN.

Since prominent attention has been given to the philanthropic efforts of Sir Henry Peek, Bart., in supplying day scholars with a basin of soup at a trifling charge, it has transpired that Dr. Campbell, M.P., had three years ago made similar arrangements in a country school near his own residence in Forfarshire, and it now appears that various neighbouring schools have adopted the plan. Dr. Campbell has written Sir Henry on the subject, enclosing accounts of the most favourable kind from the masters and others in a position to judge of the success of the movement. The payments by the scholars vary from a halfpenny to a penny per day, and in some instances a whole family are fed for the penny, on the ground that the large family means greater poverty to the parents. With these nominal payments it is astonishing how the scheme is nearly self-supporting, and the little extraneous assistance is provided in some such easy manner as a popular concert affords. From the testimony of the teachers, the health, comfort, and afternoon

staying power of the children are very perceptibly improved, and they shrewdly detect in these nourishing soups the foundation of future vigour to their, in many cases, half-starved pupils. Altogether the evidence Dr. Campbell has put forward should materially assist school managers, who already think well of practical Christianity.

THE LATE DR. KENNEDY, ELIE.

By the death of Dr. Kennedy, one of the best known and most accomplished of our country practitioners has been removed, and the public in his district of Fifeshire has lost a trustworthy adviser. He was singularly apt in commanding the confidence of his patients, diligent in his duties towards them, and zealous in keeping abreast of the times in medical and scientific knowledge. A student of some distinction in Edinburgh, he for some time assisted the late Dr. Handyside in the dissecting-room, and graduated in 1865. Dr. Kennedy was but forty-one years of age, and leaves a widow.

Mr. William Carruthers, of the British Museum, has just concluded a series of lectures known as the "Thomson Science Lectures," in the Free Church College, Aberdeen. His subject was the "History and Development of Plant Life."

The financial position of the Aberdeen Royal Infirmary continues to improve, and amongst recent donations, many of them from public works in the city, is one of £25 from Her Majesty the Queen.

Dr. Edmond, Medical Officer, Stonehaven, reports that there have been fifty-seven cases of scarlet fever, with four deaths, in the town since July. He has traced the epidemic to two imported cases, and recommends that instructions as to the prevention of a further spread of the disease should be issued.

PARIS.

(From our Paris Correspondent.)

ACCIDENT TO DR. DOUMERC.

A TERRIBLE explosion took place on Wednesday, the 5th inst. at the Faculty of Medicine of Lille, in which Dr. Doumerc, agrégé in Physics, met with a severe accident under the following circumstances:—The Doctor, with two students, were engaged in the preparation in retorts of chloride of calcium, when the former leant forwards to ascertain the temperature of the solution, which had attained 118° C. An explosion took place at that moment, and the contents of the retorts were ejected into Dr. Doumerc's face, which was severely burat; the left eye is completely lost, and the nose seriously injured.

SALICYLIC ACID AS A PRESERVATIVE.

Soon after the introduction of salicylic acid in medicine, the tradespeople, taking advantage of its preservative properties, applied it to different alimentary substances, and even to wine, beer, and other drinks, for the purpose of preserving them; but several accidents having occurred which were attributable to the use of this substance, a decree from the Prefect of Police interdicted its further employment in this way. Thereupon a petition was submitted to Government requesting the removal of the interdiction. The Government, in its turn, ordered that the matter should be re-examined. Prof. Brouardel, medical jurist, was in consequence charged by the Comité Consultatif d'Hygiène to report upon the practice thus introduced into commerce, and which is termed "salicylage." The following are the conclusions of the report:—1. The daily use of even the smallest dose of salicylic acid is unsafe, its innocuity not having been as yet demonstrated. 2. It is certainly dangerous for the subjects of lesions of the kidneys or of the liver from old age or by some degenerative process. 3. The prohibition of salicylage should be strictly maintained.

THE CARE OF LUNATICS.

In France lunatics have heretofore been allowed to be placed under the care of private individuals, independent of regular asylums and the control of official authority, and as the system has been greatly abused, an appeal was made to Government to prevent the continuation of such an objectionable practice. The Senate has been called upon to legislate on the matter, and it has adopted in principle the propositions made by its commission to the effect that hereafter no lunatic will be allowed to be retained in private houses or establishments. Each department is to have its own public asylum. In case there is no asylum in the department in which the patient resides, he is to be transferred to the nearest establishment or to a hospital, a part of which is to be allotted to such patients. The medical staffs of these institutions are to be nominated by the Minister of the Interior, the appointments being open to competition, and they will be assimilated to those of the other hospitals and asylums.

AMBULANCE SERVICE FOR PATIENTS SUFFERING FROM INFECTIOUS DISEASES.

Arrangements have been made for the conveyance to the hospitals of patients affected with epidemic or contagious diseases, particularly small-pox. The patients will be conveyed gratuitously in special vehicles, which they may obtain on application to the prefecture or to the commissary of police of their arrondissement.

COMPARATIVE MORTALITY AMONGST THE MARINE INFANTRY AND IN THE ARMY.

A report emanating from the office of the Minister of the Navy, showing the mortality in the marine infantry compared with the mortality in the army, gives the following results: In France and in Algiers the mortality in the army is 8·65 per 1000; in the marine infantry the mortality in France is 18·9 per 1000, at Martinique 32·2, and at Guadeloupe 34·5 per 1000; at Senegal 140·6 per 1000; at Réunion Island 20·9, and at New Caledonia 28·1, per 1000; at Cochinchina 97 per 1000. These figures give the average of eight years from 1873 to 1880 inclusive; they were obtained in comparing the total of the effective list with that of the deaths, and in comprising among the latter the deaths in the hospitals of France of those who were sent home sick. The general average of mortality in the marine infantry is, according to these figures, 70·7 per 1000. Among the officers alone, while the mortality in the army is 6·81 per 1000, in the marine infantry it is 99 per 1000.

A young woman was lately confined at the Maternity, and gave birth to triplets, two boys and a girl, all doing well. The infants are well constituted, but being rather smaller than single-born children at full term, Dr. Tarnier has put them into a "couveuse," as a precautionary measure.

The skull of Cartouche, the notorious robber, which used to be seen at the Sainte-Geneviève Library, has been transferred to the Museum of Natural History.

Paris, Dec. 11th, 1883.

BERLIN.

(From our own Correspondent.)

A NEW LETTER FROM KOCH.

A SECOND official report of the Cholera Commission, dated Suez, November 10th, mainly confirms the former statements. The last post-mortem examination in Alexandria furnished the same bacilli in the intestinal walls as previous examinations had done; but the inoculation experiments, although modified and multiplied in every way, were again without result. The Commission then left Alexandria for Cairo, Damietta, and Suez. In all these places important inquiries were made about the origin of the late epidemic—the results of which, although seemingly quite positive, are spoken of with due reserve. Of the greatest epidemiological interest was an excursion on board the Egyptian steamer *Damenhur*, laden with hospital equipment for the quarantine harbour at Tor. Five hundred pilgrims coming from Djedda reached this place the day after the arrival of the Commission, and although the ship surgeon declared them all healthy, a certain number proved to be ill from choleraic symptoms, and had immediately to be sent to the quarantine hospital. Returning from a trip to El Wedj some days later, the Commission found that another ship had arrived with more sick pilgrims, and that the cholera had broken out in both camps, three pilgrims from the first and one from the second ship, having died. A thorough disinfection followed this excursion. During their sojourn in Egypt Dr. Koch and his assistants have attentively studied the water-supply and filtration, the influence of the level of the Nile upon the course of the epidemic, the methods of interment, the pollution of the soil by cesspools, the meteorological conditions, &c.

Valuable researches have also been made on dysentery, on the prevalence of tuberculosis in Egypt, and on parasitic diseases (Distoma hæmatobium, Anchylostoma duodenale, Filaria sanguinis). The examination of fifty cases of Egyptian eye disease gave evidence that two different processes are confounded under this name. The one, of a more malignant character, is caused by a kind of bacterium, resembling, and perhaps identical with, the micrococcus of gonorrhœa; the other less serious process shows very small bacilli in the interior of the pus cells.

The members of the Commission express their indebtedness to His Highness the Khedive for having granted them the opportunity to visit the quarantine harbours.

Berlin, Dec. 7th, 1883.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council on Thursday last, Messrs. Howse and E. Owen were appointed members of the Board of Examiners, the previous members of the Board being re-elected with the exception of Messrs. Morrant Baker and Rivington, whose term of office had expired.

The retirement of Mr. Gay from his seat on the Council, on account of failing health, was announced. The resignation was accepted with regret, and with expressions of the high esteem in which he is held by the members of the Council.

A resolution was passed to the effect that the President and Vice-Presidents should seek an interview with the Home Secretary with the object of suggesting that when charges are brought against qualified medical men, the opinion of some acknowledged expert should be taken as to the reasonableness of the accusation preferred before the Public Prosecutor undertakes a prosecution. It will be seen that the above resolution is similar to the one passed at the Royal College of Physicians at their meeting on the 22nd ult.

THE ROGERS TESTIMONIAL.

To the Editor of THE LANCET.

SIR,—Will you kindly insert the enclosed seventh list of subscriptions in this week's LANCET, and oblige, yours truly,

J. WICKHAM BARNES.

Poor-law Medical Officers' Association, 3, Bolt-court, Fleet-street, London, Dec. 12th, 1883.

C. Sedgwick, Esq., Hollingbourne	£1	1	0
A. E. Boulton, Horncastle	1	1	0
Dr. Tyley, Wedmore	1	1	0
Jabez Hogg, Esq., 1, Bedford-square ...	1	1	0
R. R. (a well-wisher)	1	1	0
Dr. Dutton, Sidlesham	0	10	6
Dr. Grove, St. Ives	0	10	0
Dr. Jardine, Capel, Surrey	0	10	0
W. F. Brooks, Esq., Fareham	0	7	6
W. E. Soffe, Esq., East Harling	0	5	0
Dr. Harday, West Haddon	0	5	0
Dr. C. J. Connon, Allendale	0	5	0

Obituary.

GEORGE DE LANDRE, B.A., M.B., F.R.C.S.I.

MR. DE LANDRE, who died at Cashel on the 2nd inst., was born in Waterford in 1838, and, having entered Trinity College at an early age, graduated with distinction as a Bachelor in Arts and Medicine in 1859, and obtained the Fellowship of the Royal College of Surgeons, Ireland, in 1865. He served as surgeon in the Royal Navy, but his liability to sea-sickness compelled him to resign his commission, and he then entered the United States Army as surgeon in the 158th Regiment of New York Infantry, and saw much active service in the American war. In the official reports of the Commander-in-Chief to his Government, the bravery and coolness, no less than the great humanity, of Surgeon De Landre are the subjects of marked praise. At the close of the war Mr. De Landre returned to his native land and commenced practice in Limerick, in which town he resided until a few weeks before his death, enjoying the esteem of all with whom he came in contact.

JOHN WALL, A.B., M.D., OF CORK.

TYPHUS FEVER, that scourge of our profession, has added another to the number of its victims in the person of Dr. Wall, who succumbed last week, after a short illness, from this disease. Dr. Wall was medical officer of health for Cork, and senior physician to the Cork Union Hospital; and it was in the discharge of his professional duties at that institution that he contracted the disease which terminated his life. In addition to his public appointments the deceased had an extensive practice, and his premature decease has caused sincere regret. Dr. Wall was a son of the late Dr. Thomas Wall, J.P., who was for many years a member of the Poor-law Board, and graduated in Arts and Medicine in the Queen's University in Ireland in 1864.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members, having passed the required examination for the Fellowship on Nov. 22nd, 23rd, and 24th, were admitted Fellows of the College at a meeting of the Council, held on Thursday:—

Day, Donald Douglas, M.B. Lond., Blackheath; date of membership May 20th, 1880.
Marsh, Frank, L.S.A., Stafford Infirmary; April 24th, 1877.
Morrison, J. T. Jackman, M.B. Cantab., Trinity-square, Southwark; Jan. 24th, 1879.
Platt, Walter Brewster, M.D. Harvard Univ., Baltimore, United States; April 19th, 1881.
Power, D'Arcy, M.B. Oxon., Great Cumberland-place, Hyde-park; Jan. 1st, 1882.
Rand, Richard Frank, M.B. Edin., Constantinople. (Not a Member.)
Sheild, Arthur Marmaduke, L.R.C.P. Lond., Addenbrooke's Hospital; July 24th, 1879.
Square, James Elliott, L.R.C.P. Edin., Portland-square, Plymouth; Nov. 15th, 1881.
Whitehouse, John, L.R.C.P. Edin., Smethwick, near Birmingham; July 22nd, 1879.

One other candidate passed, but, not having complied with the regulations of the College, will receive his diploma at a future meeting of the Council; and eight candidates failed to reach the required standard, and were referred to their further professional studies for twelve months.

UNIVERSITY OF OXFORD.—At a congregation held on the 6th inst. the degree of M.D. was conferred on the under-mentioned gentleman:—

Wyatt, William Thomas, Exeter.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 6th inst. the degrees of M.B. and B.S. were conferred on the following gentleman:—

Sheild, Arthur M., Downing.

At a congregation of this University held on the same day, the degree of Master of Laws was conferred on—

Collingridge, William, M.A., M.D., S.Sc.Cert. Camb., Medical Officer of Health for the Port of London.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.B. (Honours) Examination:—

MEDICINE.

FIRST CLASS.

Martin, Sidney Harris Cox, B.Sc. (Scholarship and Gold Medal), University College.
Fox, Robert Fortescue (Gold Medal), London Hospital.
Eq. { Halliburton, William Dobinson, B.Sc., University College. / Tanzelmann, Edward Waldemar von, University College.
Champ, John Howard, Guy's Hospital.

SECOND CLASS.

Collier, Joseph, Owens Coll. and Manchester Royal Infirmary.
Eq. { Moline, Paul Frank, University College. / Worthington, Sidney, Guy's Hospital.
Spicer, Robert Henry Scanes, B.Sc., St. Mary's Hospital.
Eq. { Caiger, Frederick Foord, St. Thomas's Hospital. / Horrocks, William Heaton, B.Sc., Owens College.
Price, John Alfred Parry, Guy's Hospital.
Rogerson, John Thomas, Owens and University Colleges.

THIRD CLASS.

Brooks, Walter Tyrrell, King's College.
Roughton, Edmund Wilkinson, St. Bartholomew's Hospital.
Black, Robert, London Hospital.
Beverley, John Metcalfe, Owens College and Manchester Royal Infirmary.
Veisey, Clement Barnard, Owens College, Manchester Royal Infirmary, and St. Mary's Hospital.

Eq. { Hull, Walter, St. Thomas's Hospital.
Sisley, Richard, St. George's Hospital.
Thomson, St. Clair, King's College.

OBSTETRIC MEDICINE.

FIRST CLASS.

Rabbeth, Samuel (Scholarship and Gold Medal), King's College.
Roughton, Edmund Wilkinson (Gold Medal), St. Bartholomew's Hospital.
Champ, John Howard, Guy's Hospital.

SECOND CLASS.

Thomson, St. Clair, King's College.
Eq. { Jones, Charles Montagu Handfield, St. Mary's Hospital.
Sisley, Richard, St. George's Hospital.
Hind, Wheelton, Guy's Hospital.

THIRD CLASS.

Eq. { Bailey, Charles Frederic, St. Bartholomew's Hospital.
Halliburton, William Dobinson, University College.
Caiger, Frederick Foord, St. Thomas's Hospital.
Shore, Thomas William, B.Sc., St. Bartholomew's Hospital.
Fox, Robert Fortescue, London Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Collier, Joseph (Scholarship and Gold Medal), Owens College and Manchester Royal Infirmary.
Beverley, John Metcalfe (Gold Medal), Owens College and Manchester Royal Infirmary.
Price, John Alfred Parry, Guy's Hospital.
Targett, James Henry, Guy's Hospital.
Champ, John Howard, Guy's Hospital.

SECOND CLASS.

Spicer, Robert Henry Scanes, St. Mary's Hospital.
Worthington, Sidney, Guy's Hospital.
Hind, Wheelton, Guy's Hospital.

THIRD CLASS.

Martin, Sidney Harris Cox, University College.
Meyer, Charles Hartvig Louw, Guy's Hospital.
Tomlinson, Emily, London School of Medicine and Royal Free Hospital.
Fox, Robert Fortescue, London Hospital.

The following candidates have passed the recent B.S. Examination:—

FIRST DIVISION.

Caiger, Frederick Foord, St. Thomas's Hospital.
Dunn, Louis Albert, Guy's Hospital.
Martin, Sidney Harris Cox, B.Sc., University College.
Meyer, Charles Hartvig Louw, Guy's Hospital.
Wilson, Thomas, University College.

SECOND DIVISION.

Barling, Gilbert Harry, St. Barth. Hospital and Birmingham.
Hind, Wheelton, Guy's Hospital.
Rogerson, John Thomas, Owens and University Colleges.
Salmon, Arthur Guy, St. Bartholomew's Hospital.
Scarth, Isaac, Owens College and London Hospital.

UNIVERSITY OF DURHAM. — At the examination, during Michaelmas term, for degrees in Medicine and Surgery at the College of Medicine, Newcastle-on-Tyne, the following satisfied the Examiners:—

DOCTOR IN MEDICINE FOR PRACTITIONERS OF 15 YEARS' STANDING.

Dolan, Thomas Michael, L.R.C.S., L.R.C.P. Edin.
Macdonald, Roderick, L.R.C.P., L.R.C.S. Edin.

DOCTOR IN MEDICINE.

Austen, Henry Hinds, M.B., M.R.C.S.
*East, Fred. William, M.B., L.R.C.P., M.R.C.S., L.S.A.
Green, Charles, M.B., M.R.C.S., L.S.A.
Hudson, Theodore Joseph, M.B., M.R.C.S.

*Awarded the Gold Medal for best Essay.

BACHELOR IN MEDICINE.

SECOND CLASS HONOURS (in order of merit).—Walter Robert Awdry, M.R.C.S.; W. Owen Travis, M.R.C.S.; Henry Milner Hughes; E. Augustus Opie; A. Fresco Franklyn Brown, M.R.C.S., L.S.A.; Simpson Powell, M.R.C.S., L.S.A.; Henry Pottinger Keatinge, M.R.C.S.

PASS LIST (in alphabetical order).—Thomas Elisha Gordon; John Campion Grinling, M.R.C.S.; Robert Hardie; Septimus Lowes, L.R.C.S. Edin., L.S.A.; Herbert Ryding Mosse, M.R.C.S., L.S.A.; William Augustus Norry, M.R.C.S., L.S.A.; Thomas H. Openshaw, M.R.C.S.; J. Inglis Parsons; Alfred Robinson, M.R.C.S., L.S.A.; James Matthew Robson, B.A.; Charles Yaldwyn Shuter, M.R.C.S., L.S.A., E. Walpole Simmons; Frederick Spicer; J. Henry Surtees Sumner, M.R.C.S., L.S.A.; Abelardo Triay; Arthur William Wheatley, M.R.C.S., L.S.A.

MASTER IN SURGERY.—William Owen Travis, M.R.C.S.

At the examination for the degree of Doctor in Medicine for practitioners of fifteen years' standing, of three candidates one was rejected; for the degree of Doctor in Medicine, of five candidates one was rejected; for the degree of Bachelor in Medicine, of twenty-five candidates two were rejected; for the degree of Master in Surgery, of five candidates four were rejected.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 6th:—

Bennett, Frank Albert, Queen's College, Birmingham.
Griffin, John Hubert, Woburn-place.
Llewellyn, John, Mount-place, London Hospital.
Parsons, Charles John, Muxter, near Newport, Salop.

The following gentlemen also on the same day passed the Primary Professional Examination:—

William Harrison Brooks, London Hospital; Frederick John Jaynes, Middlesex Hospital; Matthew Barnwell Naghten, Dublin School of Medicine.

THE Alice Memorial Hospital at Darmstadt was opened on the 8th inst. in the presence of the Grand Duke.

THE new buildings of the Westminster Training School and Home for Nurses are to be opened at the beginning of next year by the Prince and Princess of Wales.

E. P. WESTON, on the 12th inst., commenced his walk at Lincoln, and finished the day's journey at Great Grimsby, having up to that date covered a distance of 950 miles.

ROYAL BOUNTY TO HOSPITALS.—Gifts of game and cast linen have been received from the Queen and members of the Royal Family at many of the London charities during the past week.

THE principal rowing clubs on the banks of the Thames have protested by memorial against the selection of the spot chosen for the treatment of the sewage of the Lower Thames Valley.

THE interest taken in their hospital by the work-people in the different factories at Wolverhampton has been shown by a sum of £1200 already contributed by them as a Christmas offering to the local medical charity.

SWANSEA HOSPITAL.—An anonymous letter has been sent to the secretary of this hospital enclosing Bank of England notes to the amount of £1185, to be invested for the charity. We understand the gift is most opportune, as funds are now pressingly needed to meet current expenses.

CHARLES MOREHEAD PRIZE.—An annual prize in memory of the late Dr. Charles Morehead has been founded in the University of Bombay. It is to be called the Charles Morehead Prize, of the value is of 200 rupees, to be awarded every year to the candidate who passes the L.M. and S. and Examination with the highest number of marks in Clinical Medicine.

SMALL-POX AT WIDNES.—At the usual meeting of the Widnes Local Board on the 11th inst., it was stated that Dr. Thorne Thorne, of the Local Government Board, who had lately visited Widnes had expressed his approval of the construction and position of the field infectious diseases hospital. The efforts made by the authorities of the town to promote revaccination in cases where the primary operation was unsuccessful are not so widely popular as could be desired.

METROPOLITAN ASYLUMS BOARD.—At the ordinary meeting of this Board, on the 3rd inst., a letter was read from the guardians of the poor of the parish of St. Mary, Islington, protesting against the purchase by the managers of Chaseville Park Estate, Winchmore-hill, as a site for a convalescent fever hospital, on the ground that such hospital was not required. The Works and General Purposes Committee, however, recommended that the estate, comprising thirty-six acres and a half of park land, be purchased at the price of £380 per acre. It was stated that the site was suitable in every way, and that the hospital was an actual necessity.

THE LONDON WATER QUESTION.—At a meeting of the Paddington Vestry on the 4th inst., the following resolution was passed unanimously—viz: "That this Vestry heartily congratulates Mr. Archibald E. Dobbs and Mr. Frank Dethridge, on the unanimous judgment that has been given by the House of Lords in the action against the Grand Junction Water Works Company, and this Board hereby records its appreciation of the public spirit and energy displayed by Mr. Dobbs and Mr. Dethridge in taking up a matter so deeply affecting the interests of the ratepayers of the metropolis, and of Paddington in particular, and desires to thank them for having done so." Mr. Mark H. Judge, however, suggested that some more public acknowledgment of the services rendered to the ratepayers by Mr. Dobbs and Mr. Dethridge should be made, and ultimately the following resolution was agreed to:—"That a Committee be appointed to consider how best the ratepayers of the metropolis can mark their deep sense of the gratitude due to Mr. Archibald Dobbs and Mr. Frank Dethridge for their action against the Grand Junction Water Works Company, and that the other Vestries and Local Boards of London be invited to co-operate with the Vestry in the matter."

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

AUDLAND, W. E., L.R.C.P.Lond., M.R.C.S., has been appointed Assistant House-Surgeon to the Northampton General Infirmary, vice Smith, resigned.

CARDEW, G. S., M.B., C.M.Ed., M.R.C.S., has been appointed House-Surgeon to the Teignmouth Infirmary and Convalescent Home, vice F. M. Puddicombe, resigned.

CHURTON, T., M.D., has been appointed Consulting Physician to the Batley and District Cottage Hospital.

CLARK, ANNIE E., M.K.Q.C.P.I., M.D.Berne, has been appointed Extra Acting Physician to the Children's Hospital, Birmingham.

CROOM, JOHN HALLIDAY, M.D., C.M., F.R.C.P.Ed., F.R.C.S.Ed., has been appointed Assistant-Physician to the Gynæcological Department of the Royal Infirmary, Edinburgh.

DRURY, RICHARD JOHN, M.D. Q.U.I., L.R.C.S.I., has been appointed Acting Physician to the Birmingham and Midland Hospital for Children, vice Jordan, whose appointment has expired.

GIDDINGS, R. R., M.B. & C.M. Ed., M.R.C.S., has been elected a Junior Surgeon to the Nottingham Dispensary.

HAMILTON, CHARLES WOLFE, M.D., has been appointed Government Medical Officer at Gladstone, South Australia.

JOHNSTON, F., M.B., has been appointed House-Surgeon's Assistant to the Liverpool Northern Hospital, vice Horrocks.

LOANE, JOSEPH, M.R.C.P.Ed., M.R.C.S., has been reappointed Medical Officer of Health for the Whitechapel District.

MIVART, F. ST. GEORGE, M.R.C.S., has been appointed Surgeon to the Western General Dispensary, vice G. S. Hames, F.R.C.S., resigned.

OLIVER, JAMES, M.B., C.M.Edin., has been appointed Medical Officer and Registrar to the National Hospital for the Paralysed and Epileptic, Queen-square, vice Rushworth, resigned.

PERMEWAN, ARTHUR EDWARD, M.B.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Redruth District of the Redruth Union.

PITTS, BERNARD, M.B., C.M.Cantab., F.R.C.S.Eng., has been appointed Assistant-Surgeon to the Hospital for Sick Children, Great Ormond-street.

PRYCE, T. DAVIES, M.R.C.S., L.S.A.Lond., has been elected a Junior Surgeon to the Nottingham Dispensary.

RICHARDS, THOMAS, M.B., has been appointed Senior Extra Acting Physician to the Children's Hospital, Birmingham, vice A. H. Carter, M.D., M.R.C.P., resigned.

ROBSON, A. W. MAYO, F.R.C.S.Eng., has been appointed Consulting Surgeon to the Batley and District Cottage Hospital.

SHEA, JOHN, M.D. St. And., M.R.C.S., L.S.A.Lond., has been re-appointed Medical Officer of Health for the Reading and Wokingham Rural and Urban Sanitary Districts.

TURNER, ARTHUR DUNN, M.B., C.M.Glasg., has been appointed Medical Officer and Public Vaccinator for the West Butterwick District of the Gainsborough Union.

VINRACE, E. D., M.R.C.S., has been appointed Resident Medical Officer to the Throat Hospital, Golden-square.

WARREN, JOHN MONTEITH, M.D., M.Ch.Q.U.I., has been appointed Government Medical Officer and Vaccinator for the District of Tenterfield, New South Wales.

WAUGH, HENRY D., M.D., has been appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Frederick Hicks, M.D., resigned.

WHITTELL, HOLATIO THOS., M.D., M.R.C.S., has been appointed President of the South Australia Central Board of Health.

WILSON, J. GRAHT, M.R.C.S., L.S.A.Lond., has been elected Senior Resident Surgeon to the Nottingham Dispensary.

WOLFENDEN, JOHN W., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for the Tutbury District of the Burton-on-Trent Union.

WRIGHT, ALFRED, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Romford Urban Sanitary District.

Births, Marriages, and Deaths.

BIRTHS.

GABBETT.—On the 27th ult., at Gibraltar, the wife of Surgeon-Major Poole R. D. Gabbett, prematurely, of a daughter.

LLOYD.—On the 3rd inst., the wife of A. Eyton Lloyd, Surgeon, of Rhyl, North Wales, of a son.

PARSONS.—On the 6th inst., at 13, Whitworth-road, South Norwood, the wife of H. Franklin Parsons, M.D., of a daughter.

MARRIAGES.

DE MÉRIC—COUCHER.—On the 27th ult., at St. John's Church, Weymouth, by the Rev. Mortimer Shelton, B.A. (cousin of the bride), assisted by the Rev. Canon Stephenson, M.A., Rural Dean, Staff-Surgeon E. V. de Méric, R.N., to Mary Jane Clifton, daughter of the late Martin Coucher, M.D., of Woodmenton, Worcestershire, and Weymouth.

NICHOLSON—FLEET.—On the 7th inst., at Brighton, Samuel Nicholson, M.D., of Park-crescent, Brighton, to Emma Mary, eldest daughter of Charles Fleet, of Park-crescent, Brighton.

DEATH.

JOHNSTONE.—On the 4th inst., at Ealing, Thomas Blackader Johnstone, M.D., Surgeon-General (Retired) H.M. Indian Army, third son of the late Colonel William Johnstone, C.B., 26th Regt. (Camerons).

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Dec. 13th, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 7	30·57	N.E.	35	33	..	39	29	..	Overcast
,, 8	30·53	W.	35	33	..	39	32	..	Overcast
,, 9	30·29	S.W.	37	34	..	41	31	..	Cloudy
,, 10	30·03	W.	44	43	..	50	37	..	Overcast
,, 11	29·37	W.	45	44	..	51	44	·38	Cloudy
,, 12	29·75	N.W.	44	42	..	51	42	·10	Cloudy
,, 13	29·96	W.	51	49	..	54	41	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

HYPEROSMIC ACID IN NEURALGIA.

A FEW weeks ago there appeared in these columns mention of the fact that Professor Billroth had been successfully treating an inveterate case of sciatic neuralgia by means of a hypodermic injection of hyperosmic acid. It testifies to the longing for some trustworthy means of combating neuralgia that this paragraph has led to several inquiries from medical men asking for more precise information. This we regret to be unable to afford at present, the notification of the fact being almost transcribed from the clinical column of the *Allgemeine Wiener Zeitung* (No. 44, p. 473, and No. 45, p. 481). We therefore strongly advise our readers not to attempt this new method at present until more detailed information is received from Vienna. This caution is necessary, seeing that hyperosmic acid is so powerful a poison. Its employment is practically limited to histology, owing to its power of blackening fatty tissues, and we have never heard before of its application to medicine.

A Parish Doctor.—The question is too vague to admit of a definite answer.

ARSENIC IN IDIOPATHIC ANÆMIA.

To the Editor of THE LANCET.

SIR,—My attention has been called to a very interesting and valuable paper by Dr. F. Willcocks in the *Practitioner* for July and August last. It contains a case which affords an additional and striking illustration of the value of arsenic in idiopathic anæmia, after the failure of iron "given for three or four months before in various forms and in large doses, as well as quinine, strychnia, bismuth, &c." Dr. Willcocks' elaborate observations on the microscopic characters of the blood, more especially with regard to the number and hæmoglobin value of the red corpuscles, also throw an important explanatory light upon the causes of the success or failure of treatment by iron and by arsenic in the different forms of anæmia respectively. My paper in THE LANCET having been written as far back as June last, is the reason of the valuable contribution not having been therein referred to; and for the same reason an exhaustive paper, more especially in relation to the clinical history and pathology of the disease, by Dr. Pye-Smith in the last volume of Guy's Hospital Reports, has been unnoticed. In your last number a case is given under the head of "Treatment of Idiopathic Anæmia by Arsenic," in which, after treatment by "iron and nourishing diet" for between three and four months, which "proved of no use," within nineteen days of the patient's death arsenic was tried for ten days only. On discontinuing this and resuming the treatment by iron, "the disease progressed rapidly towards the fatal end," and the patient died eight days afterwards. After a fair consideration of these facts, it appears to me that no conclusion can justly be drawn from this case one way or the other.

I am, Sir, yours truly,

Swansea, November 29th, 1883. GEO. PADLEY.

AMERICAN PORK.

THE decree of the 18th of February, 1881, prohibiting the importation of American salt pork within the territory of the French Republic has just been revoked. It was felt that the decree specially affected the interests of the poor, who were deprived of a cheap article of food, and the Consulting Committee of Public Hygiene determined to further investigate the matter. This led to the conclusion that there was no serious danger of trichinosis when the pork was salted with care and good brine employed. In removing the prohibition, the various municipalities and local authorities are called upon to examine with special attention all salted pork before it is offered for sale, and not to hesitate to seize and destroy that which is not thoroughly and properly salted. The committee further states that, after numerous practical experiments, the destruction of the trichinæ by the thorough cooking of pork was amply demonstrated. As in France no one cares to eat underdone pork, and as salting also suffices to kill the cause of disease, the Committee of Hygiene and the Government both decided that it was no longer necessary to interfere with the freedom of commerce and the supply of cheap food to the people. On the other hand, the conditions that, in the opinion of these authorities, render this freedom safe must be universally known to secure their due observance. In England the question interests us all the more, as the importation of American pork has never been checked. Public attention has not been awakened to the existence of this danger by any such energetic legislation, and the duty of warning the public by the ordinary channels of publicity becomes therefore especially urgent.

Inquirer.—We think an agreement as to the advertisement should have been come to by the parties concerned; but we do not see anything essentially wrong or objectionable in the terms of it.

THE TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—With all the deference due to a man of large experience in the treatment of cholera, I would remind Surgeon-Major Hamilton that carbolic acid is not carbolic oil. I state in my letter that I have had no experience in the treatment of the disease, but that I base my suggestion upon the results of treatment in those allied to it. I may now state that, with the conviction that a vegetable oil with no irritant properties will act quite as well, if not better, than castor-oil in the treatment of dysentery, I have used the carbolic oil emulsion according to the formula in my letter of Nov. 17th in two cases of that disease, and with the best results. Surgeon-Major Hamilton well describes the abundant discharges as due to a continued exosmosis, but is not this due to the denudation of the epithelium? May it not be also that the oil or emulsion will furnish the necessary protection to the exposed mucous membrane until the carbolic acid shall have quelled the initial disturbing cause, and a new layer of epithelium, subject then to no irritation, shall have been provided? I am, Sir, your obedient servant,

Clayton-le-Moors, Dec. 5th, 1883. C. R. ILLINGWORTH, M.D.

To the Editor of THE LANCET.

SIR,—I was pleased to see in your issue of Dec. 1st the bold assertion of Surgeon-Major Hamilton, that we know practically nothing of Asiatic cholera and its treatment. I have for several years entertained a similar conviction, and when last confronted with that dread disease in the epidemic of 1879 at Jellalabad, being unacquainted with any drug which I conscientiously believed to be of service, I did not administer medicine of any kind to a single case of fully developed cholera. The cramps were relieved by assiduous shampooing of the muscles, and thirst assuaged by soda-water. The latter gave such relief to the symptoms that the poor fellows (Sepoys) gradually came to believe it to be medicine, and when a fresh case occurred the victim's first cry was for "Belatee tanee." The mortality was 66 per cent. No drug up to the present has been proved to be of the slightest efficacy in averting the fatal issue in this disease. Let us therefore frankly admit that for the cure of Asiatic cholera our science is to-day helpless, though not hopeless.

I am, Sir, yours faithfully,

Norfolk, Dec. 10th, 1883. H. MALLINS, M.B.,
Surgeon, I.M.D. (retired).

REMARKABLE FECUNDITY.

To the Editor of THE LANCET.

SIR,—You may think the following case worth publishing, as one can but hope it to be rather an unusual one. A patient of mine gives me the following history:—She was married when twenty-six years of age, and ceased menstruating when thirty-nine, after the birth of her last child, having had sixteen children and one miscarriage in fourteen years. She nursed each of her children, but found the nursing did not prevent her becoming pregnant in any way. The dates of the births were—July, 1845, a son; Nov. 1846, a son; Feb. 1848, a son; Nov. 1849, twin daughters; Sept. 1851, twins (son and daughter); Nov. 1852, daughter; 1853, twins; July, 1854, twins (son and daughter); July, 1855, twins (sons); 1856, miscarriage; May, 1857, daughter; June, 1858, son. She is a tall spare woman, and at the present time is in very fair health. She is sixty-three years of age. Out of all these children only six are now living. I am, Sir, yours truly,

Brighton, Dec. 8th, 1883. H. ALGERNON HODSON.

UNQUALIFIED HOSPITAL MEDICAL OFFICERS IN NEW SOUTH WALES.

THE *Australasian Medical Gazette*, protesting against the appointment by the committees of some of the country hospitals in New South Wales of men who, though practising as medical men, are unregistered by the Medical Board as medical officers to this institution, this having been done even when a legally qualified man has been residing in the town, is of opinion that any patient in the hospitals would have good ground for action at law against the committees of these hospitals, as they enter the hospital with the understanding that the medical officer shall be a legally qualified practitioner, and thinks that the fact of the patient paying nothing would not bar the action. The fact that hospitals, subsidised by public moneys, are allowed by their managing bodies to remain without proper medical attendance should certainly be brought under the notice of the Government of the colony in which the scandal exists.

Nemo.—We cannot say that our correspondent was wrong. There might have been more magnanimity in going to see the dying woman than in refusing to go. But the patient initiated the cold doctrine of "rights," and she could not complain of the doctor if he caught up the refrain, and refused to resume the attendance which he had given so generously for years.

SEWAGE FARMING.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 17th I notice a paragraph relative to the balance-sheet presented to the Town Council of Reading for the half year ending Michaelmas, 1883, which states that "the net profits, after deducting landlords' expenses, amounted to £3518." Being interested in sewage farming, and also having some practical experience in this mode of dealing with sewage as late chairman of our farm sub-committee, I was pleased to learn that such a report could be presented, at the same time I was aware that our balance-sheet just showed the reverse—namely, a loss on the year's operations. Through the kindness of our assistant town clerk I have been permitted to see the last balance-sheet of Manor Farm, Reading, which consists of 700 acres, and I find the following:—

"For year ending Michaelmas, 1883, a balance to profit of £1138 14s. 8d. For half-year ending Michaelmas, 1883, a balance to profit of £3584 4s. 1d." Well, certainly this looked well, and I was pleased to find that the operation of sewage farming was likely to become profitable; but on examining the items in the balance-sheet I find no sum mentioned for rent (which I would term landlord's expenses), hence my hopeful conclusions had to disappear. Now, if we take the rent at £2 per acre (our farm here is £4 per acre), we should have a sum of £1400 for rent against the balance of £1138, thus showing, even at a low rental, a balance on the wrong side.

Just now, while sewage farming is still *sub judice*, it is very desirable that we should have accurate statements as to results. In my opinion, a sewage farm cannot be said to pay unless it clears the rent along with all working expenses. The interest on the laying out of farm, of sewage outfall works and conveyance of sewage to land, should be, and is properly, an item chargeable to the rates; but when this is done the farm must pay its own rent before it can be said to pay or make a profit.

I am, Sir, yours truly,

Wigan, Dec. 8th, 1883. WM. BERRY.

J. C.—Every effort to transmit typhoid fever to the lower animals has hitherto failed; therefore we believe our correspondent may proceed as suggested without risk.

Vega might apply to Moore and Co., 125, Houndsditch, E.C.

M.D. (Leeds).—Yes.

ATTENDANCE ON SERVANTS.

To the Editor of THE LANCET.

SIR,—In your journal of Dec. 1st there is a short article headed "Medical Attendance on Servants," apparently in reply to a correspondent who, barring the courtesy he recommends, seems himself the illustration of the case he submits, and he throws off his *incognito* in sending me the article. It therefore calls for a slight criticism specifically. It supposes that masters of households pay all their servants' medical expenses, which is not the rule, and, if it were, would cause reckless extravagance and imposition. Servants are often repaid by their masters such expenses, if fairly incurred in their service. The question, then, is whether a master having in any instance taken higher advice for himself justifies a local practitioner in a petulant and rude refusal of advice to all his servants. Local practitioners in the country can hardly assert there are no men of higher standing in the profession whose advice may occasionally be resorted to, even not in consultation with them. The kindest master of a household may, while ordinarily recognising the local practitioner for himself and his servants, without offence or want of attention to either his servants or the local practitioner, once in a way take an outside independent opinion. A blunt refusal of local advice to all the surroundings of a country house on such a ground, unable as they may be, and must be in cases of urgency, to get more distant or expensive help, leaves no remedy but the invitation to more considerate, temperate, and reasonable men to come within ordinary reach of them. I am, Sir, your obedient servant,

Dec. 4th, 1883. NORTON.

NOTIFICATION OF INFECTIOUS DISEASE.

Melicus.—1. A report on this subject was presented by a Select Committee on Police and Sanitary Regulations to the House of Commons on June 9th, 1882. It dealt with the effect of compulsory notification of infectious diseases at Barrow-in-Furness, Birkenhead, Blackburn, Blackpool, Bolton, Bradford, Burton-on-Trent, Darby, Huddersfield, Jarrow, Lancaster, Leicester, Llandudno, Manchester, Norwich, Nottingham, Oldham, Preston, Reading, Rotherham, Stafford, Stalybridge, and Warrington. From this report it will be seen that the authorities and their medical officers of health are practically unanimous in a belief as to the great utility of such notification in checking the spread of infection. In 1882 seven other towns in England adopted the same provision. They are—Accrington, Chaderton, Halifax, Macclesfield, Newcastle, Bury, and Salford, the total of English towns coming under its operation up to the end of 1882 being thirty. The law as to removal of patients is contained in section 124 of the Public Health Act, 1875, and affects all districts coming under the provisions of that Act.—2. Consult the recent reports of the Chief Inspector of Factories.—3. No such society has come under our notice.

G. R. is entitled, in our opinion, to three guineas a week, provided there is no complaint to make of the way in which his duties have been discharged.

Mr. Francis Galton.—The request shall be attended to. But there was no danger of our falling into the error.

CAUSE OF CONGENITAL CLUB-FOOT.

To the Editor of THE LANCET.

SIR,—The following case appears of some interest in connexion with the view as to the causation of congenital club-foot that Dr. Quarry Silcock supported in the paper that was read by him on this subject at a late meeting of the Harveian Society. It seems in some points to resemble the case described by Cruveilhier, which was quoted by Dr. Silcock.

Mrs. W——, aged forty-two, mother of nine children, all of whom are perfectly formed and healthy, was prematurely confined at the eighth month on August 15th, 1881. During the latter part of this pregnancy she had suffered a great deal of discomfort and pain in the abdomen, and had expressed to me several times her conviction that the child was not lying right in the womb. The first sign that labour had commenced was the discharge of the liquor amnii, no pains having previously occurred, and when seen by me the left foot was found presenting. On delivery, which occurred after about six hours' labour, the child was found to present the following appearances:—It had apparently been dead about twenty-four hours. There was very marked talipes varus on both sides. Each hand, which consisted of only four fingers (the thumb being absent), articulated with the outer border of the radius, joining it at right angles. The liver and intestines were contained in a globular cyst, with thin and transparent walls, which projected from the centre of the abdomen, with which it communicated by an opening behind. The funis joined the centre of the cyst at its most prominent point. The pinnæ were absent from both ears. The thorax was small, the ribs being soft and ununited in front. The bones of the skull were thick and soft, but separated by wide gaps; the two halves of the frontal bone being distinct. Sectio cadaveris unfortunately could not be obtained.

This case resembles that of Cruveilhier in the coexistence of double talipes and displacement of the carpus of each hand on to the outer surface of the radius, and these deformities may possibly have been the result of the same kind of faulty position of the fœtus in utero. There were in addition, however, the above-mentioned evidences of defective development, and it is at least equally possible that some accompanying defect of the nervous system may have caused the deformity of the hands and feet. I am, Sir, yours obediently,

South Devon, Oct. 29th, 1883. ALBERT MAY.

Dr. Richard Budd (Barnstaple).—Our correspondent had better apply direct to the writer.

Dr. Fergus.—The report will appear in an early number.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—Pardon my applying to you to insert an appeal in your journal on my behalf; nothing but the direst necessity could have induced me to do it. I am a duly qualified practitioner (L.A.C.) of sixty-two years' standing (nineteen years in a country village, and twenty-five years in Vassall-road, Brixton, with a small and poor practice). I was taken seriously ill in 1865, from which I have never recovered, and have been bedridden nine years and five months. My only income is £20 per annum from the British Medical Benevolent Fund, and I am now in my eighty-ninth year. If you will kindly insert this appeal I shall be very grateful. The only medical man now living that knew me when I was in practice is Dr. Watts, of Vassall-road, Brixton, S.E., who attended me in my illness, and has continued to do so ever since. I have no relations but my two daughters, both in humble circumstances.

I am, Sir, yours obediently,

77, Edward-street, Penton-place, S.E., Dec. 3rd, 1883. P. F. SCARNELL.

Toiler.—We assume our correspondent refers to an appointment the salary for which will be partly repaid by moneys voted by Parliament. To such cases the Order of the Local Government Board applies, and it merely requires that the person appointed shall be "a legally qualified medical practitioner." But under ordinary circumstances we believe that the appointment of a doubly qualified practitioner is more likely to receive the sanction of that Board than in a case where the candidate only possesses a single one.

Dr. Fergusson.—We cannot at the moment refer our correspondent to any trustworthy source of information on the subject. The climate of Buenos Ayres has the reputation of being one of the most humid and changeable in the world.

Lancet.—Neither has the right, but the M.B. is much nearer to it.

SOUTH AFRICA AS A FIELD FOR MEDICAL PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—Some time ago I noticed a question asked in the medical papers regarding South Africa as a field for medical men. As a well-wisher of all my medical brethren, I think it no more than my duty to give a warning word to those who come to South Africa in expectation of making their fortune. When I came to this land nothing was so disparaging to me as the tale from every medical man I met. His book debts showed £1000 per annum, and his actual income perhaps one-half of this sum. For anyone compelled to leave the home country on account of health I should certainly recommend South Africa if its climate is of a nature suited to him, as he may be fortunate in getting on a farm where his services will be recompensed by a sufficiency from the neighbours to enable him to live without much exertion. And then his life must be a miserable existence. The fact is South Africa is overstocked with medical practitioners, and this has taken place within a few years. There is a town in the colony near the Free State border where one of three practitioners died lately. There have come six to fill his place, and I may mention that two practitioners are almost sufficient for the town and its district.

A good all-round man prepared to do work of all sorts, and with a thorough experience (hospital and private), at home—for experience cannot be gained here very readily, owing to the few patients a doctor sees, and these few he sees perhaps only once in an illness—can do well, as he would most probably do well at home; but for any man whose practical knowledge of his profession is not ripened by years of experience, I should say to that one he had better remain in the mother country, for he is much more likely to lose anything he has gained from practice than gain anything he has not previously learned.

Practice out here is so entirely different from practice at home, that it is well perhaps that I should give some idea of it. Living as I am, in the Free State, whose population of whites a year and a half ago was 62,000, I am amazed to learn of the number of qualified practitioners. At that time the list of those licensed by the Free State, which licence a man has to pay £20 yearly for, amounted to forty. Licences are not required except for the purpose of suing for fees, which many believe a bad policy, and the probability is that at that time there were as many or more practising without a licence as with it. Since that time the population of the Free State cannot have increased more than 1000 (I fear it has decreased owing to the collapse of the diamond fields), or 1·60th, while the number of medical practitioners has doubled. The natives have their own doctors, and no amount of reasoning would persuade them to employ a white man.

If you get two or three patients, or say five patients, in a week in your district here you may consider yourself lucky, as these might be worth perhaps £10 to £12, if they paid, as fees go here. No doubt if work were so plentiful as to give a man opportunity to live pretty much in the saddle, he would make his fortune; but a paying journey, especially now, when the work is so much cut up, is a wind-fall to most men. Add to this the fact that it requires for this country a man who can accommodate himself to any circumstance, and your readers who are ambitious to seek their fortunes here will, I think, pause ere they think of running the risk of a spoiled life, seeing what is before them. However, if a man is prepared to rough it in many senses of that term, and to live absolutely without any social advantages, if he has been engaged in all the branches of the profession, such as a country practice in a colliery district in England or Scotland affords, and if, besides having these recommendations, he is thoroughly sober and patient, and able to acquire the Dutch language, which is so easy to a German or even a Scotchman, but so difficult to an Englishman, then he will do well in South Africa.

There are men here in the Colony and Free State towns making £2000 annually, according to their books; while in the same town all the other practitioners, perhaps three or four in number—good men too—are unable to get more than the bare necessaries of life by their profession alone. A few years ago, when money was so plentiful, everyone got on, and many made small fortunes; but the rush of men here, even if the times were the same as formerly, has made a world of difference to many a well-established and good man. The total collapse of business over all South Africa, and the absence of rains for months, have reduced the land almost to one of famine at the present moment for medical men as well as for others, and should this fearful collapse be recovered from in a few years hence, and the population become wealthier and more numerous, the land will scarcely be sufficient decently to support the doctors already here, who will manage to struggle through the awful times in store for everybody.—I am, Sir, yours, &c.,

South Africa, Oct. 26th, 1883. A SOUTH AFRICAN MEDICAL PRACTITIONER.

M. M.—Such questions must be answered by the practitioner himself. The fees, even of consultants, for such journeys would vary, and general practitioners have no tariff for exceptional services of the kind.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor John Marshall, London; Dr. Pocock, London; Dr. Pollard, London; Mr. Sampson Gamgee, Birmingham; Mr. Thomas Bryant, London; Dr. Grimshaw, Dublin; Mr. Cadge, Norwich; Mr. W. Ross, London; Mr. Henry Smith, London; Messrs. Coke and Co., Alfreton; Mr. Royes Bell, London; Mr. F. F. Lee, Salisbury; Mr. Cannon, Valparaiso; Mr. Startin, London; Mr. W. Whitehead, Manchester; Mr. Morris, Swansea; Mr. C. J. Bond, Leicester; Mr. C. V. Macleod, Inverness; Mr. Lamond; Mr. J. Hutchinson, London; Dr. Wynter, Wandsworth; Mr. Pagin Thornton, London; Mr. Hodson, Brighton; Mr. Thomas, Birmingham; Mr. Pedley, Stockwell; Dr. De Bartolomé, Sheffield; Dr. Budd, Barnstaple; Dr. Hayward, Liverpool; Mr. Berry, Wigan; Dr. Hooper, London; Mr. Gwyn, London; Mr. Gardiner, Glasgow; Dr. Robert Jones, Southgate; Mr. Hozier, Wolverhampton; Dr. Ogle, London; Mr. H. M. Fenwick, West Boldon; Dr. Fairbank, Doncaster; Dr. Anderson, Ulverston; Mr Hamilton Hoare, London; Dr. Malone, Limerick; Mr. Castance, London; Dr. Nathan Allen, Lowell, Mass.; Dr. Vincent Bell, Rochester; Mr. F. F. Jones, Llanfyllin; Dr. Elder, Nottingham; Mr. Walsham, London; Dr. Cullingworth, Manchester; Dr. Ormsby, Dublin; Dr. Diver, Kenley; Mr. Bredin, Staplehurst; Dr. Swan, Batley; Mr. Francis Galton; Mr. J. H. Jackson, Wigan; Mr. Harding; Mr. Greig Smith, Clifton; Mr. St. Clair Thomson, London; Mr. Buckler, Nottingham; Dr. Dinin, Paris; Mr. Birchall, Liverpool; Messrs. Cassell and Co., London; M. Charpentier, Paris; Mr. Moir, Ought William; Mr. Moulding, Woking; Messrs. Wright and Co., Birmingham; Mr. Armstrong, Birmingham; Mr. Maythorn, Biggleswade; Mr. Fox, Manchester; Messrs. Brown and Co., London; Mr. R. Freeman, London; Mr. Adams, Bodmin; Messrs. Levy and Son, London; Dr. Rowe, Eccles; Mr. Rivington, London; Mr. Philp, London; Dr. Hawkes, London; Messrs. Christy and Co., London; Messrs. Widdenmann and Co., London; Mr. Ashmead, Brierley-hill; Mr. L. Humphry, Cambridge; Mr. J. S. Cousens; Mr. Birt, Granada; Mr. C. Dawson, M.P., Dublin; Mr. Gobat; J. R.; J. D.; Somerscens; Ely; C. K.; D. F. H.; Companion, Brighton; C., Sheffield; G. R.; Inquirer; M R C.S., L.S.A.; E. F. G.; Nemo; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Bower, Bedford; Mr. Bulmer, Hereford; Mr. Sampson, London; Mr. Loy, Northallerton; Dr. Harrison, Hasiingdon; Mr. Webb, Queensland; Mr. Davis, Bath; Mr. Lawton, Eccles; Mr. Griffiths; Messrs. Hill and Co., Glasgow; Messrs. Radcliffe and Co., Liverpool; Mr. Lowe, Workington; Messrs. Butterfield and Co., Northampton; Mr. Rohn, Ipswich; Mr. Knowles, Cambridge; Messrs. Bullock and Co., London; Mr. Williams, Port Isaac; Dr. Saul, Lancaster; Dr. Hunt, Newcombhill, U.S.A.; Mr. Haxworth, Rock Ferry; Mr. Bregess, Manchester; Dr. Scott, Shrewsbury; Mr. Kynaston, Folkingham; Mr. Anderson, Bignore, India; Dr. Jones, Shahjahanpore; Mr. Lennard; Mr. Allan, London; Omicron; Dr. T., Liverpool; C. B. W., Dudley; G. M. G., Littleborough; Medicus, Matlock; H. B., Derby; W. D., Manchester; Englishman; H. W., London; Norman; Vigilans; Yorke; Epsilon; W. S. M., Spennymoor; R. M., West Bromwich; E. C., Wandsworth; W.; Spes, London; Iota; A. P. Z.; Middleton; X.; H. H.; Medicus, Rawtenstall; &c., &c.

Brisbane Courier, Bombay Gazette, The Labour News, Birmingham Daily Post, Waterford Standard, Manchester Evening Mail, Pullen's Kent Argus, The Lark, Revue Sanitaire, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Dec. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Cantor Lecture: Mr. W. Mattieu Williams, "On the Scientific Basis of Cookery."
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir Andrew Clark, "On Catheter Fever."

Tuesday, Dec. 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Quiet Necrosis; Melanosis after Melanotic Sarcoma of the Choroid; Three Cases of Tubercular Disease of the Tongue (living); Two Cases of Tubercular Ulceration of the Tongue; Tubercular Ulcers of the Base of the Epiglottis (card); Three Examples of Pancreatic Disease; Dermoid Cyst of the Finger.

Wednesday, Dec. 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

Thursday, Dec. 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Dec. 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 22.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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